UK MET OFFICE
GLOBAL DATA MONITORING REPORT

August 2006

Data Assimilation
Meteorological Office
Fitzroy Rd
Exeter
Devon
EX1 3PB

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1. Introduction

As the WMO-appointed lead centre for monitoring surface marine data, the U.K. Meteorological Office produces monthly statistics on the quality of these observations received at RSMC Exeter. This report includes this information along with statistics for most other types of data. The figures and tables contained herein are presented according to the agreed standards for the exchange of monitoring results.

The report is based on data received at the UK Meteorological Office Headquarters, Exeter in time for inclusion into the appropriate analysis (the current cut-off time is approximately 7.2 hours after each analysis time). The evaluation of data quality is based on comparison with the appropriate 6-hour global model forecast (background) field, although to provide background values valid at the observation time for non-main hour data, time-interpolation of the T+3, T+6 and T+9 forecasts is used; and for sea surface temperature the background field is the analysis from the previous day. Generally, the background field is of high quality except in data sparse areas, tropical regions and areas close to steep orography where care should be taken in interpreting the statistics shown.

Comments or queries on the report are welcome and should be addressed to:-

Mr. M. Harrison
Observations Data Monitoring Group
Met Office
Fitzroy Road
Exeter
Devon
United Kingdom
EX1 3PB

2 Global Data Monitoring Statistics

Ships, Fixed buoys, Platforms and Drifting buoys observations

TABLES 1and 2 contain lists of the stations which are considered to have returned suspect observations of pressure, windspeed, wind direction or sea surface temperature, as appropriate, during the month. The criteria for quality control are given on the header page for each table.

Figures 1 and 2 show 10 degree lat/long box average numbers of SHIP/SYNOP and DRIFTER observations received per day throughout the month at Exeter and assimilated into model runs. All data are included. Box average values are plotted as the nearest whole number (values of x.5 are rounded up). Where the average is more than 999, then 999 is plotted. A box with no observations is blank. If the 24 hour average >0 but <0.5, then 0 is plotted.

Synop Observations

Table 3 contains a list of stations which are considered to have returned suspect observations of Pressure during the month. The criteria for quality control are given in the header page. The reporting practice of each station is included in the list of statistics.

At the UK Met. Office, we monitor SYNOP pressure after it has been interpolated to our Global NWP Model's surface height. For most synoptic stations (about 75%), the surface pressure (at the model surface) is calculated from the reported station-level pressure, or, if this is not available, the height of a standard pressure-level (e.g. 850 hPa or 700 hPa). If neither of these are available, or if the reported station-level pressure is deemed unreliable, the reported mean sea-level pressure is used (about 25% of SYNOPs).

Aircraft observations

Tables 4A (300-150 hPa) and 4B (1000-301 hPa) contain lists of statistics calculated from data received from all airline carriers.

Figures 3A (300-150 hPa) and 3B (1000-301 hPa) show 10 degree lat/long box average numbers of aircraft reports in AIREP/AMDAR code (including AIREP, ACAR, AMDAR, ASDAR and ADS) received per day throughout the month at

Exeter and assimilated into model runs. Observations with a vector wind difference (compared with the model background field) of >60 m s^{-1} have been excluded. Box average values are plotted as the nearest whole number (values of x.5 are rounded up). Where the average is more than 999, then 999 is plotted. A box with no observations is blank. If the 24 hour average >0 but <0.5, then 0 is plotted.

Figures 4A-7A (300-150 hPa) and 4B-7B (1000-301 hPa) show wind statistics for AIREP/ASDAR in AIREP/AMDAR code (including AIREP, ACAR, AMDAR, ASDAR and ADS). Observations with a vector wind difference > 60 m s^{-1} have been excluded. Statistics have not been calculated for 10 degree lat/long boxes containing <31 observations.

Figure	Parameter
4	Mean wind vectors
5	Mean observation - background wind vector
6	Mean observation-background speed (m s^{-1})
7	RMS observation-background vector (m s^{-1})

Radiosonde Observations

TABLES 5-7 contain lists of the stations which are considered to have returned suspect observations of geopotential height, vector wind or wind direction, as appropriate, during the month. The criteria for quality control are given on the header page for each table.

Figures 8 and 9 show 10 degree lat/long box average numbers of TEMP 500 hPa GEOPOTENTIAL HEIGHT and TEMP/PILOT 300 hPa WIND observations received per day throughout the month at Exeter and assimilated into model runs. Data from all hours are included. Box average values are plotted as the nearest whole number (values of x.5 are rounded up). Where the average is more than 999, then 999 is plotted. A box with no observations is blank. If the 24 hour average >0 but <0.5, then 0 is plotted.

APPENDIX I shows details of the gross error limits used in TABLES 5 and 6 and the weights used in the RMS values in TABLE 5.

Satellite Observations

Figures 10-24 show satellite wind statistics for all geostationary satellites. All plots other than **AVAILABILITY** show average data where there are > 10 observations in a 10 degree lat/long box.

Figure	Parameter Plotted	Layer (hPa)
10	Availability/average daily number	701-1000
11	Vector mean wind (observed)	701-1000
12	Observation-background vector wind difference	701-1000
13	Mean observation-background speed differences	701-1000
14	RMS observation-background vector difference	701-1000
15	Availability/average daily number	401-700
16	Vector mean wind (observed)	401-700
17	Observation-background vector wind difference	401-700
18	Mean observation-background speed differences	401-700
19	RMS observation-background vector difference	401-700
20	Availability/average daily number	101-400
21	Vector mean wind (observed)	101-400
22	Observation-background vector wind difference	101-400
23	Mean observation-background speed differences	101-400
24	RMS observation-background vector difference	101-400

Figures 25-39 show sounding statistics from the polar orbitting satellite NOAA-15. Figure 25 shows the mean daily number of ATOVS soundings, and figures 26-39 show mean and standard deviation observation-background differences for brightness temperature, for selected channels.

Figure		Weighting function peak (hPa)
26	Mean	Surface (HIRS8)
27	SD	Surface (HIRS8)
28	Mean	700 (HIRS15)
29	SD	700 (HIRS15)
30	Mean	500-700 (HIRS11)
31	SD	500-700 (HIRS11)
32	Mean	400 (HIRS4)
33	SD	400 (HIRS4)
34	Mean	700 (AMSUA5)
35	SD	700 (AMSUA5)
36	Mean	300 (AMSUA7)
37	SD	300 (AMSUA7)
38	Mean	100 (AMSUA9)
39	RMS	100 (AMSUA9)

Figures 40-54 show sounding statistics from the polar orbitting satellite NOAA-16. Figure 40 shows the mean daily number of ATOVS soundings, and figures 41-54 show mean and standard deviation observation-background differences for brightness temperature, for selected channels.

Figure		Weighting function peak (hPa)
41	Mean	Surface (HIRS8)
42	SD	Surface (HIRS8)
43	Mean	700 (HIRS15)
44	SD	700 (HIRS15)
45	Mean	500-700 (HIRS11)
46	SD	500-700 (HIRS11)
47	Mean	400 (HIRS4)
48	SD	400 (HIRS4)
49	Mean	700 (AMSUA5)
50	SD	700 (AMSUA5)
51	Mean	300 (AMSUA7)
52	SD	300 (AMSUA7)
53	Mean	100 (AMSUA9)
54	RMS	100 (AMSUA9)

Figures 55-69 show sounding statistics from the polar orbitting satellite NOAA-18. Figure 55 shows the mean daily number of ATOVS soundings, and figures 56-69 show mean and standard deviation observation-background differences for brightness temperature for selected channels.

Figure		Weighting function peak (hPa)
56	Mean	Surface (HIRS8)
57	SD	Surface (HIRS8)
58	Mean	700 (HIRS15)
59	SD	700 (HIRS15)
60	Mean	500-700 (HIRS11)
61	SD	500-700 (HIRS11)
62	Mean	400 (HIRS4)
63	SD	400 (HIRS4)
64	Mean	700 (AMSUA5)
65	SD	700 (AMSUA5)
66	Mean	300 (AMSUA7)
67	SD	300 (AMSUA7)
68	Mean	100 (AMSUA9)
69	RMS	100 (AMSUA9)

N.B. All satellite sounding data is bias-corrected (and thinned) before being assimilated in the UKMO NWP model.

Revisions

1. May 95 Monitoring statistics for NOAA-11 removed. Figures 25-27 now show data for NOAA-12
2. May 95 Notes giving details of observations included in wind direction statistics clarified and corrected.
3. August 95 Monitoring statistics for NOAA-14 added with figures 28-30.
4. February 96 Monitoring statistics for GOES-7 have been replaced by statistics for GOES-8 and GOES-9.
5. April 96. 500 km and 120 km SATEMs replaced by 120 km resolution temperature profiles produced locally from the radiances disseminated by NESDIS.
6. February 97 Monitoring statistics for Meteosat 5 have been replaced by statistics for Meteosat 6.
7. Sept 97 Monitoring statistics for NOAA-12 removed. Figures 25-27 now show data for NOAA-11
8. January 1998. Increase in resolution of UKMO global forecast model.
9. April 1998. GOES winds ceased on 2nd March 1998, and were replaced with GOES high resolution winds from 15th.
10. June 1998. Monitoring statistics for Meteosat-6 were replaced by monitoring statistics for Meteosat-7, from 3rd June.
11. June 1998. Corrections in our processing of radiosonde data resulted in a decrease in the number of 500hPa geopotential heights in Figure 8 of about 230 per 24 hours (compared with previous reports), and a small increase in the number of 300hPa winds in Figure 9.
12. July 1998. Meteosat-5 began transmitting winds from 2nd July, at 63 degrees East (over the Indian ocean), and this data is included in the statistics.
13. July 1998. GOES-9 (at 135W) was replaced mid-month by GOES-10 (initially at 105W, moving towards 135W).
14. February 1999. Problems with NOAA-11, and TOVS data ceased to be assimilated from 26 February.
15. March 1999. UKMO introduced 3-D VAR assimilation system on 29 March, and also began assimilating ATOVS data from NOAA-15.
16. May 1999. Included statistics for ATOVS sounding data from NOAA-15.
17. September 1999. Included statistics for high resolution visible winds from Meteosat-5 and Meteosat-7.
18. October 1999. The 3-D VAR assimilation system was upgraded on 19 October, including improvements in the assimilation of ATOVS radiances, use of SSM/I surface wind speed, an improvement in the calculation of surface pressure for SYNOPs, and thinning and revision of observation errors of aircraft data.
19. November 1999. High resolution visible winds from Meteosat-5 and Meteosat-7 removed until used operationally.
20. April 2000. Aireps in Table 4 and Figures 3-7 split into ranges 300-150 hPa (A) and 1000-301 hPa (B).
21. September 2000. Corrected an error affecting the mean positions of a minority of buoys in Table 2.
22. November 2000. An error in the production of Table 6 was corrected. Previously, some sondes with suspect vector winds were being missed.
23. April 2001. Included statistics for ATOVS sounding data from NOAA-16.
24. May 2001. Included statistics for sea surface temperatures from marine surface observations.
25. December 2002. Included statistics for ATOVS sounding data from NOAA-17.
26. December 2002. Meteosat-7 and Meteosat-5 SATOB winds replaced by higher resolution BUFR-coded winds.
27. November 2003.Included temperature and relative humidity statistics for ships, fixed buoys and platforms in Table 1.
28. November 2003. NOAA 17 statistics no longer available due to malfunction of the AMSU-A instrument.
29. December 2005. Included statistics for ATOVS sounding data from NOAA-18.
30. August 2006. COSNA statistics no longer included in report.

TABLE 1

MONITORING OF MARINE SURFACE OBSERVATIONS
MONTHLY SUSPECT LIST - SHIPS, FIXED BUOYS AND PLATFORMS
MONITORING CENTRE: EXETER
MONTH: Aug 2006

Monitoring procedures

Period :One calendar month.

Data monitored :Reports from each unique identifier for ships, fixed buoys and platforms.

Standard of comparison :Background field from UKMO global model.

Observation times :All hours

Elements monitored
:Mean sea level pressure (hPa).
:Wind speed ($\mathrm{m\ s^{-1}}$).
:Wind direction (Degrees).
:Air temperature (Degrees C).
:Relative Humidity (%).
:Sea surface temperature (Degrees).

Parameters monitored

:NOBS	:Number of observations received excluding duplicates.
:PGE	:Percentage of observations with gross errors.
:%REJ	:Percentage of observations flagged excluding those with gross errors.
:SD	:SD of difference of observations from background values excluding those with gross errors.
:BIAS	:Mean difference of observations from background values excluding those with gross errors. **N.B. a positive bias indicates the wind observation is veered to the background.**
:RMS	:Root Mean Square difference of observations from background values excluding those with gross errors.

GROSS ERROR LIMIT
:15 hPa (pressure)
:25 $\mathrm{m\ s^{-1}}$ (vector wind)
:15 degrees (air temperature)
:10 degrees (sea surface temperature)

SELECTION CRITERIA :NOBS ≥ 20 , and one or more of the following:

1.|bias|	$\geq$ 4 hPa	(pressure),
	$\geq$ 5 $\mathrm{m\ s^{-1}}$	(wind speed),
	$\geq$ 30 degrees	(direction).
	$\geq$ 3 degrees	(sea surface temperature).
	$\geq$ 4 degrees	(air temperature)
	$\geq$ 15%	(relative humidity)
2.SD	$\geq$ 6 hPa	(pressure),
	$\geq$ 80 degrees	(direction).
	$\geq$ 5 degrees	(sea surface temperature).
	$\geq$ 6 degrees	(air temperature)
	$\geq$ 25%	(relative humidity)
3.PGE	$\geq$ 25	

N.B. Observations of wind direction are only included in the wind direction statistics if the observed OR background wind speed > 5 $\mathrm{m\ s^{-1}}$

IDENTIFIER	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
AUBD	P	22	0	86	0.9	5.4	5.5
AUFI	P	20	0	0	0.9	5.0	5.1
A8JR3	P	20	0	80	2.8	5.0	5.7
BBXX VOP	P	23	0	100	2.2	-4.0	4.6
C6FV3	P	41	0	0	0.9	4.1	4.2
C6FZ6	P	23	0	100	0.7	8.1	8.2
C6LG6	P	31	0	42	1.0	-6.1	6.2
C6PZ3	P	36	0	0	1.6	7.0	7.2
C6QK	P	38	0	5	1.7	5.8	6.0
DLCX	P	34	0	3	1.5	4.3	4.6
OWTW2	P	23	0	17	2.9	4.1	5.0
S6JS	P	58	2	100	4.2	-4.7	6.3
TESTCA5	P	193	0	100	0.5	-11.1	11.1
TESTFR	P	54	100	100			
UAMX	P	44	5	75	7.9	0.0	7.9
UANF	P	24	0	100	0.5	5.9	6.0
UCJL	P	30	0	20	3.2	-5.3	6.2
UCUO	P	100	9	100	6.3	-2.7	6.9
UCUQ	P	59	3	100	4.9	5.1	7.1
UGNQ	P	61	0	18	3.2	-4.5	5.5
VKMZ	P	25	4	68	6.7	0.3	6.7
V2BN9	P	24	0	4	1.6	-6.2	6.4
WDB9918	P	30	0	0	1.1	-5.2	5.4
WDB9986	P	23	9	13	1.6	7.4	7.5
YJZJ5	P	52	0	13	1.6	4.2	4.4

IDENTIFIER	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
JKCF	SPEED	23	0	0	2.7	5.0	5.6
OWFU2	SPEED	56	0	100	6.6	5.8	8.8
SCKM	SPEED	23	4	9	3.9	5.3	6.6
VTXK	SPEED	75	9	80	6.6	8.8	11.0
3EAT6	SPEED	76	0	67	2.6	-5.7	6.3

IDENTIFIER	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
CGBN	DIRN.	79	0	0	33.8	32.8	47.1
CGJK	DIRN.	56	0	0	16.9	45.5	48.5
FNJI	DIRN.	24	0	0	39.9	-33.5	52.1
LDGJ	DIRN.	240	0	0	104.1	-0.1	104.1
S6JT	DIRN.	29	0	0	86.5	-11.9	87.3
UGOU	DIRN.	20	0	0	55.0	-34.8	65.0
23174	DIRN.	181	0	0	98.1	47.7	109.1
52086	DIRN.	98	0	0	108.4	109.6	154.1
62023	DIRN.	469	0	0	21.4	75.4	78.4

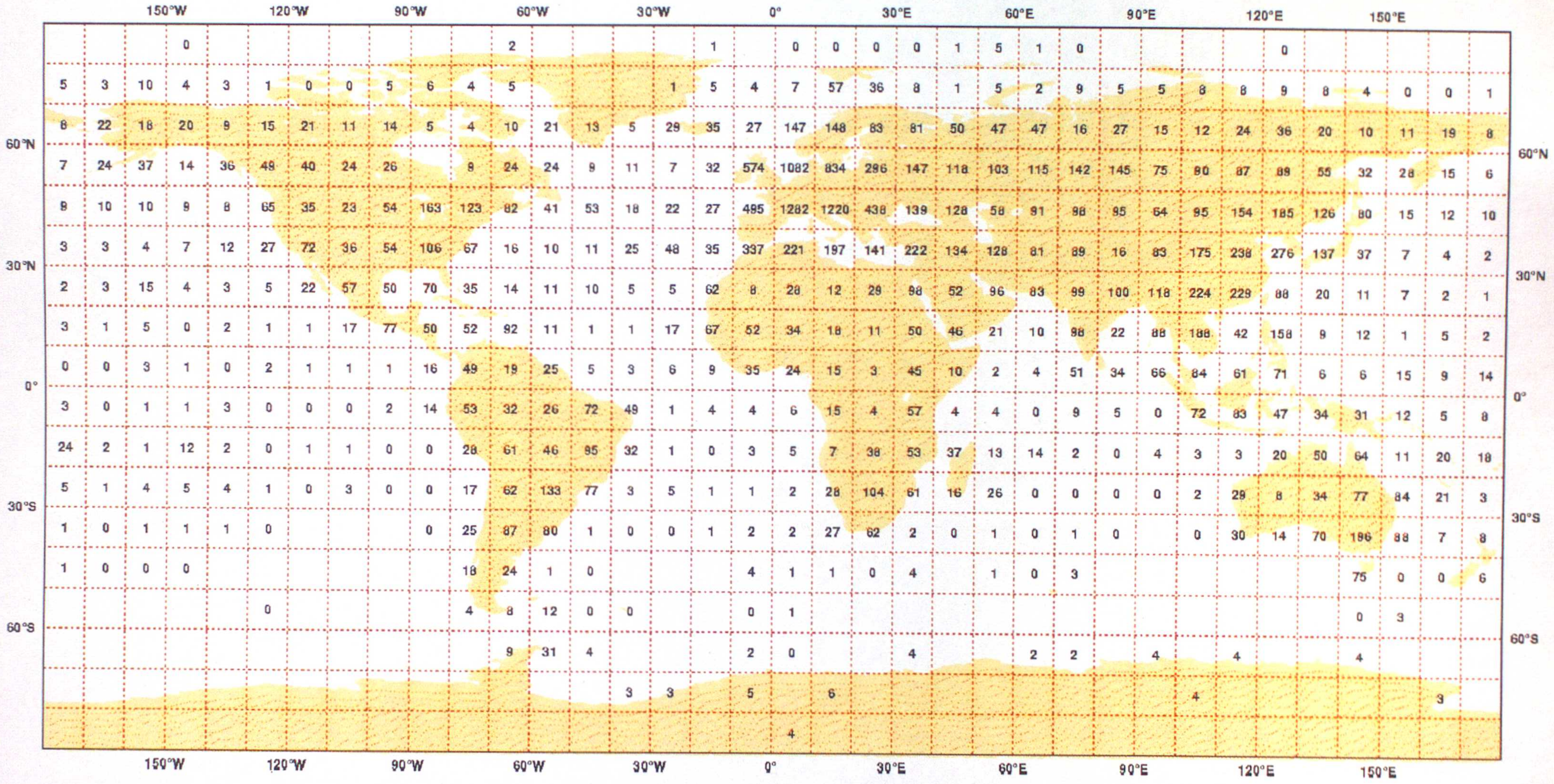
IDENTIFIER	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
BBXX CGB	T	43	5	100	4.6	4.7	6.6
BBXX CGJ	T	31	3	100	2.8	5.8	6.4
CGJK	T	369	1	100	3.6	5.3	6.4
CG2464	T	44	0	100	2.6	6.4	6.9
C6LG6	T	31	6	100	2.5	10.3	10.6
C6RN3	T	25	0	100	4.3	7.3	8.5
PHEO	T	36	0	100	4.9	6.0	7.8
PHFV	T	63	2	100	4.4	6.8	8.1
TESTFR	T	53	0	100	2.8	7.5	8.0
UAMX	T	44	7	100	3.4	6.2	7.1
UCTS	T	119	1	100	2.0	5.7	6.0
UGGA	T	54	0	100	2.1	4.6	5.0
UGTP	T	29	0	100	2.4	6.0	6.5
UHBY	T	24	0	100	2.2	4.7	5.2
WCY2306	T	89	3	100	2.6	9.4	9.8

WCY7052	T	26	0	100	1.8	4.1	4.4
WN4201	T	28	11	100	4.4	8.4	9.4
WXJ63	T	136	0	100	3.8	6.5	7.5
45141	T	132	83	100	0.7	13.8	13.8
45144	T	644	4	100	2.2	10.7	10.9
45150	T	536	53	100	2.0	11.9	12.0
46081	T	664	0	100	1.5	5.1	5.3
46088	T	844	3	100	4.4	-5.4	7.0
46181	T	724	0	100	1.7	4.1	4.5

IDENTIFIER	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
A8HN8	RH	55	0	100	12.9	-15.8	20.4
BATFR09	RH	156	0	100	28.7	-10.2	30.5
DBBX	RH	662	0	100	6.9	16.5	17.9
DBBXX	RH	33	0	100	7.7	15.2	17.1
ELWX5	RH	40	0	100	24.6	-18.2	30.6
FNAT	RH	64	0	100	4.3	17.0	17.5
OUEX	RH	23	0	100	24.4	-21.2	32.3
SCKM	RH	23	0	100	14.6	-25.7	29.5
TESTFR	RH	53	0	100	14.3	-29.3	32.6
VNRL	RH	20	0	100	8.3	27.3	28.5
VRZZ5	RH	45	0	100	3.6	-16.4	16.7
VTXK	RH	82	0	100	9.1	-15.1	17.6
V7JC2	RH	28	0	100	26.0	-9.8	27.8
46088	RH	840	0	100	18.3	30.8	35.8

IDENTIFIER	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
A3BO2	SST	30	3	53	1.6	-3.8	4.1
CGJK	SST	210	32	78	3.3	4.9	5.9
CGTF	SST	49	78	114	2.8	6.4	6.9
C6RM7	SST	28	0	68	0.6	-3.5	3.5
DCCM2	SST	66	2	100	0.8	-4.1	4.2
DGGV	SST	32	0	84	0.9	3.4	3.5
DHSI	SST	55	0	100	1.3	-3.8	4.0
DIGW	SST	26	0	85	1.0	-3.5	3.6
DQVO	SST	21	0	29	1.1	3.2	3.4
KGTY	SST	24	0	17	0.7	-3.0	3.1
KRHX	SST	26	0	100	2.5	-3.6	4.4
KS044	SST	28	0	71	0.9	-4.0	4.1
KS049	SST	145	0	100	2.6	-4.2	4.9
LAIP5	SST	65	0	85	1.5	-3.5	3.8
PGTG	SST	23	0	91	2.9	-7.2	7.7
P3BP9	SST	33	6	100	2.1	5.3	5.7
P3ZY6	SST	25	0	100	1.1	5.1	5.2
S6HU4	SST	20	0	100	1.8	-3.1	3.6
S6IW	SST	60	0	42	3.4	-3.0	4.5
S6MJ	SST	28	0	14	1.1	-3.2	3.4
UASP	SST	107	0	26	0.6	-3.5	3.5
UCCZ	SST	20	60	85	6.1	0.8	6.2
UHQP	SST	33	67	100	0.8	-9.1	9.1
V7DN3	SST	24	4	13	0.7	-3.0	3.1
WAAH	SST	74	0	100	1.0	3.3	3.5
WCZ9703	SST	63	0	40	1.9	-3.0	3.5
WSRH	SST	22	0	100	1.1	-4.5	4.7
WZJD	SST	24	0	100	0.6	-4.4	4.4
45141	SST	112	100	100			
45144	SST	605	100	100			
45145	SST	607	100	100			
45150	SST	521	100	100			
45158	SST	314	0	100	0.8	4.5	4.6
46029	SST	423	0	74	0.7	-3.5	3.6
9MCR3	SST	24	0	33	1.9	-3.7	4.2
9MCY3	SST	54	0	15	0.7	3.3	3.3

Figure 1. SHIP/SYNOP mean daily count. AUGUST 2006
All hours
Global average number of observations in 24 hours = 21088



			0								2					1		0	0	0	0	1	5	1	0					0					
5	3	10	4	3	1	0	0	5	6	4	5				1	5	4	7	57	36	8	1	5	2	9	5	5	8	8	9	8	4	0	0	1
8	22	18	20	9	15	21	11	14	5	4	10	21	13	5	29	35	27	147	148	83	81	50	47	47	16	27	15	12	24	36	20	10	11	19	8
7	24	37	14	36	49	40	24	26		8	24	24	9	11	7	32	574	1082	834	286	147	118	103	115	142	145	75	80	87	89	55	32	28	15	6
8	10	10	9	8	65	35	23	54	163	123	82	41	53	18	22	27	495	1282	1220	438	139	128	58	91	98	95	64	95	154	185	126	80	15	12	10
3	3	4	7	12	27	72	36	54	106	67	16	10	11	25	48	35	337	221	197	141	222	134	128	81	89	16	83	175	238	276	137	37	7	4	2
2	3	15	4	3	5	22	57	50	70	35	14	11	10	5	5	62	8	28	12	29	98	52	96	83	99	100	118	224	229	88	20	11	7	2	1
3	1	5	0	2	1	1	17	77	50	52	92	11	1	1	17	67	52	34	18	11	50	46	21	10	98	22	88	188	42	158	9	12	1	5	2
0	0	3	1	0	2	1	1	1	16	49	19	25	5	3	6	9	35	24	15	3	45	10	2	4	51	34	66	84	61	71	6	6	15	9	14
3	0	1	1	3	0	0	0	2	14	53	32	26	72	49	1	4	4	6	15	4	57	4	4	0	9	5	0	72	83	47	34	31	12	5	8
24	2	1	12	2	0	1	1	0	0	28	61	46	95	32	1	0	3	5	7	38	53	37	13	14	2	0	4	3	3	20	50	64	11	20	18
5	1	4	5	4	1	0	3	0	0	17	62	133	77	3	5	1	1	2	28	104	61	16	26	0	0	0	0	2	29	8	34	77	84	21	3
1	0	1	1	1	0				0	25	87	80	1	0	0	1	2	2	27	62	2	0	1	0	1	0		0	30	14	70	196	88	7	8
1	0	0	0							18	24	1	0				4	1	1	0	4		1	0	3							75	0	0	6
					0					4	8	12	0	0			0	1														0	3		
											9	31	4				2	0			4			2	2		4		4			4			
														3	3		5		6									4						3	
																		4																	

TABLE 2

MONITORING OF MARINE SURFACE OBSERVATIONS
MONTHLY SUSPECT LIST - DRIFTING BUOYS
MONITORING CENTRE: EXETER
MONTH: Aug 2006

Monitoring procedures

Period :One calendar month.

Data monitored :Reports from each unique identifier for drifting buoys.

Standard of comparison :Background field from UKMO global model.

Position :Average latitude and longitude for period.

Observation times : All hours

Elements monitored
:Mean sea level pressure (hPa).
:Wind speed (m s^{-1}).
:Wind direction (degrees).
:Sea surface temperature (degrees).

Parameters monitored

:NOBS :Number of observations received excluding duplicates.

:PGE :Percentage of observations with gross errors.

:%REJ : Percentage of observations flagged excluding those with gross errors

:SD :SD of difference of observations from background values excluding those with gross errors.

:BIAS :Mean difference of observations from background values excluding those with gross errors.
N.B. a positive bias indicates the wind observation is veered to the background.

:RMS :Root Mean Square difference of observations from background values excluding those with gross errors.

GROSS ERROR LIMIT
:15 hPa (pressure)
:25 m s^{-1} (vector wind)
:10 degrees (sea surface temperature)

SELECTION CRITERIA : NOBS ≥ 20 , and one or more of the following:

1.|bias|
≥ 4 hPa (pressure),
≥ 5 m s^{-1} (wind speed),
≥ 30 degrees (direction).
≥ 3 degrees (sea surface temperature).

2.SD
≥ 6 hPa (pressure),
≥ 80 degrees (direction).
≥ 5 degrees (sea surface temperature).

3.PGE ≥ 25.

N.B. Observations of wind direction are only included in the wind direction statistics if the observed OR background wind speed > 5 m s^{-1}

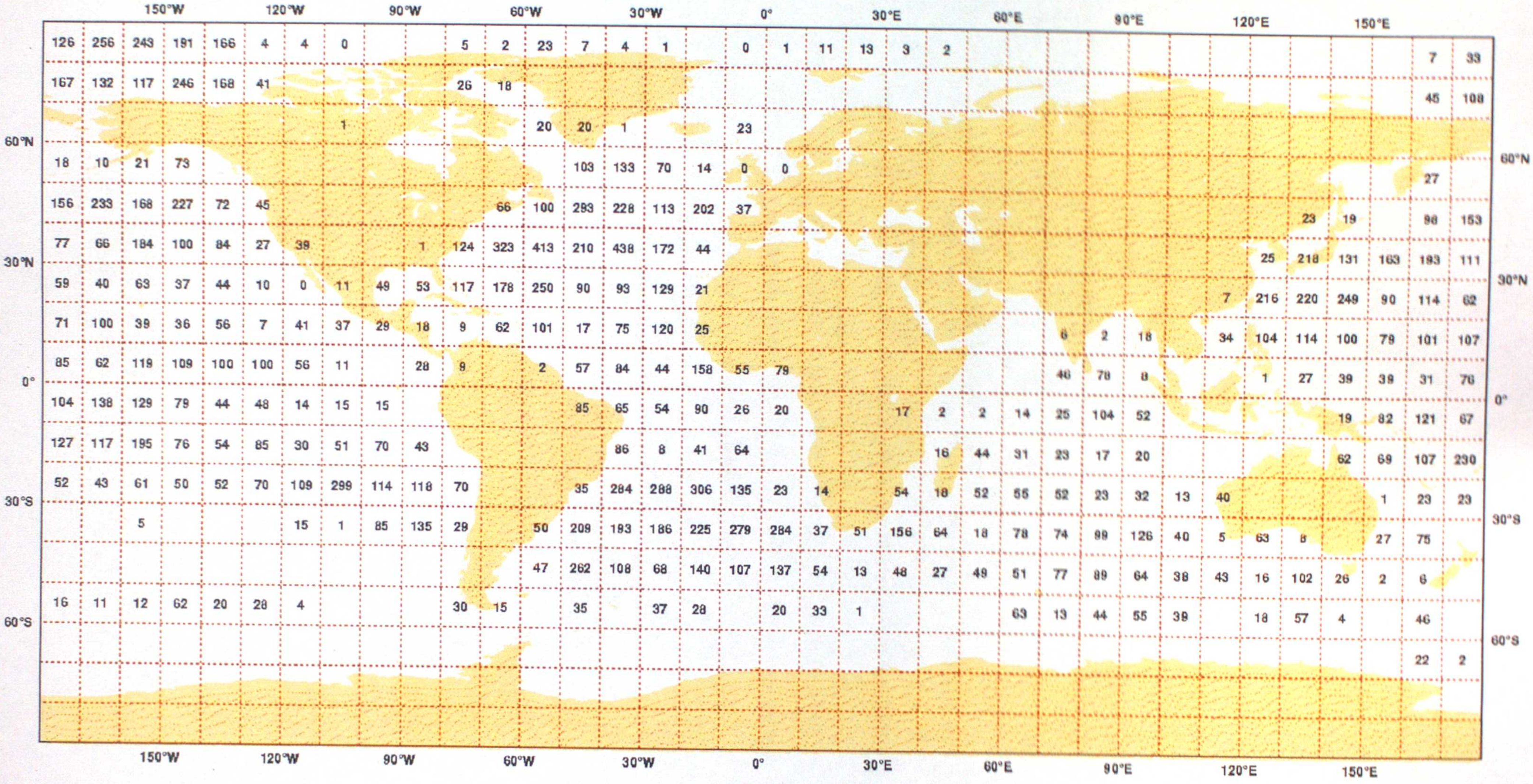
IDENTIFIER	LAT.	LONG.	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
17658	-55.1	66.6	P	929	76	100	8.3	-0.5	8.3
23594	-7.9	68.4	P	437	0	100	2.7	-6.0	6.6
25574	84.5	91.9	P	25	72	100	2.9	0.7	3.0
41552	32.9	-117.3	P	334	1	98	3.1	-6.4	7.1
41671	33.2	-117.3	P	243	1	100	3.1	-5.3	6.2
52649	19.7	144.9	P	110	45	45	0.8	0.3	0.9
54933	-50.7	-10.6	P	754	29	100	5.3	-1.7	5.5
68992	-54.4	3.3	P	369	0	100	1.1	-5.0	5.1
71636	-59.7	15.9	P	225	58	100	5.2	-5.4	7.5
74544	-56.2	46.1	P	993	15	100	6.2	-3.8	7.3

IDENTIFIER	LAT.	LONG.	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
15952	-2.9	-14.4	SPEED	382	0	100	1.1	-6.3	6.4
26501	88.5	17.1	SPEED	25	72	100	1.5	15.4	15.5

IDENTIFIER	LAT.	LONG.	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
13972	3.3	-7.0	DIRN.	300	0	0	18.7	45.4	49.1
13975	4.1	-12.3	DIRN.	438	0	0	14.7	34.4	37.4
15951	3.0	1.9	DIRN.	355	0	0	10.8	39.7	41.1
26501	88.5	17.1	DIRN.	23	78	0	4.7	*****	103.9

IDENTIFIER	LAT.	LONG.	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
16528	-48.0	61.4	SST	221	0	100	1.5	6.5	6.6
16556	-48.1	61.9	SST	233	0	100	1.5	6.9	7.0
22625	18.6	121.1	SST	20	0	100	1.2	-5.9	6.0
31510	4.2	-26.3	SST	180	0	91	1.5	4.6	4.9
32521	-14.6	-161.2	SST	428	0	100	0.8	5.0	5.0
33630	-42.2	-50.0	SST	905	0	96	0.9	4.7	4.8
34520	-36.1	-51.4	SST	793	0	93	0.7	3.5	3.5
41552	32.9	-117.3	SST	138	22	97	1.3	4.3	4.5
41685	33.3	-54.1	SST	877	0	100	0.4	-4.0	4.0
44760	53.3	-46.7	SST	30	100	100			
51961	20.9	-156.7	SST	35	17	100	1.2	-3.7	3.9
56549	-11.5	90.3	SST	718	0	100	0.7	3.4	3.5
61832	35.0	25.7	SST	272	2	100	2.7	3.3	4.3
63529	67.9	-28.4	SST	2919	0	95	1.1	3.9	4.0

Figure 2. DRIFTER mean daily count. AUGUST 2006
All hours
Global average number of observations in 24 hours = 23805



126	256	243	191	166	4	4	0			5	2	23	7	4	1		0	1	11	13	3	2												7	33
167	132	117	246	168	41					26	18																							45	108
							1					20	20	1			23																		
18	10	21	73										103	133	70	14	0	0																27	
156	233	168	227	72	45						66	100	283	228	113	202	37														23	19		96	153
77	66	184	100	84	27	39			1	124	323	413	210	438	172	44														25	218	131	163	193	111
59	40	63	37	44	10	0	11	49	53	117	178	250	90	93	129	21													7	216	220	249	90	114	62
71	100	39	36	56	7	41	37	29	18	9	62	101	17	75	120	25									6	2	18		34	104	114	100	79	101	107
85	62	119	109	100	100	56	11		28	9		2	57	84	44	158	55	79							46	78	8			1	27	39	39	31	76
104	138	129	79	44	48	14	15	15					85	65	54	90	26	20			17	2	2	14	25	104	52					19	82	121	67
127	117	195	76	54	85	30	51	70	43					86	8	41	64					16	44	31	23	17	20					62	69	107	230
52	43	61	50	52	70	109	299	114	118	70			35	284	288	306	135	23	14		54	18	52	55	52	23	32	13	40				1	23	23
		5				15	1	85	135	29		50	209	183	186	225	279	284	37	51	156	64	18	78	74	99	126	40	5	63	8		27	75	
												47	262	108	68	140	107	137	54	13	48	27	49	51	77	89	64	38	43	16	102	26	2	6	
16	11	12	62	20	28	4				30	15		35		37	28		20	33	1				63	13	44	55	39		18	57	4		46	
																																		22	2

TABLE 3

MONITORING OF LAND SURFACE OBSERVATIONS
MONTHLY SUSPECT LIST - SYNOPS & AUTOSYNOPS
MONITORING CENTRE: EXETER
MONTH: Aug 2006

Monitoring procedures		
Period		:One calendar month.
Data monitored		:Reports from each unique identifier for synops & autosynops.
Standard of comparison		:Background field from UKMO global model.
Observation times		:00, 06, 12, 18 UTC
Elements monitored		:Surface pressure (hPa).
Parameters monitored	:HT(m)	:Station height (in metres) as given in WMO No. 9 Vol A
	:RP	:Pressure reporting practice M=mean sea level pressure (hPa) reported. S=Station level pressure reported. 8=Geopotential height (m) of 850 hPa surface reported. 7=Geopotential height (m) of 700 hPa surface reported.
	:NOBS	:Number of observations received excluding duplicates.
	:NGE	:Number of observations with gross errors.
	:PGE	:Percentage of observations with gross errors.
	:%REJ	:Percentage of observations flagged excluding those with gross errors.
	:SD	:SD of difference of observations from background values excluding those with gross errors.
	:BIAS	:Mean difference of observations from background values excluding those with gross errors.
	:RMS	:Root Mean Square difference of observations from background values excluding those with gross errors.
GROSS ERROR LIMIT	:15 hPa	(pressure)
SELECTION CRITERIA	:NOBS	≥ 20 ,and one or more of the following:
	1.|bias|	≥ 4 hPa
	2. SD	≥ 6 hPa
	3.PGE	≥ 25.

N.B. For stn ht ≥ 500m, mslp is that calculated from station level pressure where available.
For stn ht < 500m, mslp is that as reported by the station where available.

SUSPECT SYNOPS (PRESSURE) BY WMO REGION AUG 2006

WMO REGION 1:

STATION	LAT	LONG	HT(M)	RP	NOBS	NGE	PGE	%REJ	SD	BIAS	RMS
60320	35.9N	5.4W	2	MS	53	0	0	0	1.3	-8.9	9.0
60423	36.3N	8.0E	680	S8	91	91	100	0			
60549	33.6N	0.3W	1149	S	90	1	1	31	1.1	4.6	4.7
63160	10.4N	45.0E	9	M	26	8	31	0	0.9	-3.7	3.8
63330	13.5N	39.5E	2070	MS	40	37	93	0	0.0	-14.8	14.8
63333	11.1N	39.7E	1903	MS	63	0	0	2	1.3	5.1	5.3
63334	10.3N	37.7E	2515	MS	60	0	0	0	1.1	10.5	10.6
63450	9.0N	38.8E	2354	MS	66	0	0	0	0.8	4.2	4.3
63801	4.9S	29.6E	882	S8	71	4	6	0	0.9	7.5	7.6
63881	8.0S	31.6E	1923	M	57	0	0	0	0.7	13.3	13.3
67295	19.1S	33.5E	731	S8	33	9	27	0	0.9	13.3	13.3
68014	19.6S	18.1E	1411	S8	81	0	0	0	0.5	-7.0	7.0
68030	18.5S	25.6E	1071	S8	91	2	2	0	4.2	10.2	11.0
68102	19.9S	16.4E	1343	S8	121	0	0	0	0.5	6.0	6.0
68291	24.3S	31.1E	524	S8	114	0	0	0	0.6	-4.0	4.0
68300	26.6S	15.1E	16	MS	120	2	2	0	0.6	-13.4	13.4
68312	26.5S	18.1E	1067	S8	83	0	0	0	0.6	4.5	4.5
68396	26.5S	31.3E	641	S8	61	0	0	2	0.9	4.8	4.9
68575	30.0S	30.0E	1175	S8	122	122	100	0			

WMO REGION 2:

STATION	LAT	LONG	HT(M)	RP	NOBS	NGE	PGE	%REJ	SD	BIAS	RMS
28666	55.3N	67.3E	140	MS	87	0	0	0	1.7	4.3	4.6
30554	54.5N	113.6E	995	MS	122	1	1	1	0.9	11.2	11.2
31534	50.4N	131.0E	230	MS	123	0	0	1	1.8	-4.4	4.8
35416	49.1N	54.7E	128	MS	123	0	0	0	0.6	4.1	4.1
36982	41.9N	78.2E	3635	S7	99	1	1	1	0.5	5.0	5.0
38846	38.4N	70.0E	1437	S8	81	2	2	1	1.5	-5.7	5.9
38944	37.5N	69.4E	448	MS	53	0	0	0	0.8	-6.0	6.1
40435	27.0N	44.1E	991	MS	57	0	0	0	0.6	7.6	7.6
40700	39.6N	47.9E	45	MS	119	0	0	0	0.9	-5.3	5.4
40713	37.4N	46.3E	1475	MS	117	35	30	1	0.8	13.5	13.5
40726	36.8N	45.7E	1384	MS	122	0	0	0	0.7	4.9	4.9
40741	36.5N	61.2E	235	MS	121	0	0	1	0.9	-4.9	5.0
40743	36.2N	57.7E	978	MS	122	0	0	0	0.6	6.4	6.4
40757	35.6N	53.4E	1171	MS	117	1	1	0	0.7	4.9	4.9
40780	33.6N	46.4E	1362	MS	120	0	0	0	0.5	5.4	5.4
40854	29.1N	58.4E	1067	MS	117	0	0	0	0.8	11.2	11.2
41252	23.4N	56.5E	244	MS	70	0	0	0	0.7	-8.7	8.7
41254	23.1N	57.6E	1755	S8	115	115	100	0			
41466	13.7N	44.1E	1402	S8	77	0	0	0	0.8	-7.5	7.5
44416	28.6N	81.6E	720	MS	78	3	4	1	1.0	5.4	5.5
47022	40.8N	128.2E	1224	S	103	0	0	1	2.1	5.8	6.2
47678	33.1N	139.8E	79	MS	123	0	0	0	0.6	-8.5	8.5
48921	21.6N	101.9E	923	S	51	51	100	0			
48924	21.1N	101.5E	644	S	47	1	2	2	0.8	11.6	11.6
48925	20.7N	102.0E	550	S	46	0	0	0	0.9	-9.5	9.5
48938	19.2N	101.7E	326	MS	56	42	75	0	0.4	14.5	14.5
48957	14.8N	106.8E	105	M	46	0	0	0	0.9	4.2	4.3
50978	45.3N	130.9E	234	MS	123	0	0	0	0.6	-5.5	5.5
52866	36.6N	101.8E	2262	S	122	0	0	0	0.9	-4.5	4.6
53646	38.3N	109.8E	1058	MS	123	0	0	0	0.6	-11.6	11.6
54292	42.9N	129.5E	178	MS	123	0	0	0	0.6	-8.6	8.6
56462	29.0N	101.5E	2994	S	123	0	0	0	1.0	7.8	7.9
56768	25.0N	101.5E	1773	S	123	0	0	0	0.6	-5.2	5.2
57816	26.6N	106.7E	1074	MS	123	67	54	0	0.3	-14.5	14.5
59023	24.7N	108.1E	214	MS	123	0	0	0	0.7	-5.5	5.5

59663	21.8N	112.0E	22	MS	123	0	0	2	1.2	-7.7	7.8

WMO REGION 3:

STATION	LAT	LONG	HT(M)	RP	NOBS	NGE	PGE	%REJ	SD	BIAS	RMS
80099	7.1N	70.7W	122	MS	23	0	0	0	1.7	-4.1	4.4
80426	9.4N	70.6W	582	MS	35	0	0	0	1.0	4.2	4.3
82181	2.0S	54.1W	146	MS	88	0	0	0	1.2	5.3	5.4
82287	3.1S	41.8W	46	MS	57	0	0	2	0.9	-4.0	4.1
82704	7.6S	72.7W	170	MS	88	0	0	0	1.0	-4.1	4.2
83235	12.4S	46.4W	604	MS	91	0	0	1	0.8	5.5	5.6
83332	14.1S	46.4W	826	MS	91	0	0	11	1.8	12.8	12.9
83470	17.9S	50.9W	727	MS	86	0	0	0	0.8	-5.9	6.0
83531	18.6S	46.5W	940	MS	92	0	0	0	0.6	-6.4	6.4
83676	21.1S	49.0W	536	MS	89	0	0	0	1.2	-4.6	4.8
83738	22.5S	44.5W	440	MS	92	0	0	4	1.3	-6.2	6.3
83836	25.5S	50.6W	837	MS	92	0	0	0	0.7	-5.0	5.0
83970	31.3S	50.9W	4	MS	64	0	0	0	1.3	-5.8	5.9
84132	0.9S	75.4W	215	MS	34	0	0	3	2.2	4.3	4.8
84140	1.1S	79.5W	73	MS	34	1	3	0	0.5	6.8	6.8
84143	1.0S	78.6W	2628	S7	30	0	0	0	0.5	-4.3	4.3
84160	1.3S	78.6W	2940	S7	32	2	6	0	0.6	14.0	14.0
84377	3.8S	73.3W	125	MS	115	0	0	0	1.3	4.5	4.7
84425	5.9S	76.1W	179	MS	24	0	0	0	0.9	5.1	5.2
84452	6.8S	79.8W	29	MS	50	0	0	0	0.6	5.3	5.3
84455	6.5S	76.4W	281	MS	86	0	0	0	1.2	7.4	7.5
84472	7.1S	78.5W	2620	S	58	0	0	2	0.9	-6.0	6.1
84474	7.2S	76.7W	350	S	26	0	0	0	1.2	9.6	9.7
84501	8.1S	79.0W	26	MS	90	0	0	0	0.6	4.8	4.8
84686	13.6S	72.0W	3248	S	115	0	0	0	0.8	-4.5	4.6
84688	13.7S	73.4W	3444	S	47	1	2	0	0.7	-13.2	13.2
84720	14.9S	75.0W	567	MS	59	0	0	0	0.8	5.3	5.4
84782	18.1S	70.3W	468	MS	84	0	0	0	1.0	4.2	4.3
85140	14.3S	67.4W	140	MS	59	0	0	0	1.2	8.5	8.6
85264	18.5S	64.1W	1998	S	55	55	100	0			
85312	19.8S	63.9W	992	S	49	0	0	10	1.6	-9.3	9.4
85406	18.5S	70.2W	55	M	118	0	0	0	0.8	4.3	4.4

WMO REGION 4:

STATION	LAT	LONG	HT(M)	RP	NOBS	NGE	PGE	%REJ	SD	BIAS	RMS
70194	66.6N	145.3W	431	S	109	103	94	16	0.6	1.4	1.5
70333	56.9N	158.6W	29	S	121	112	93	0	0.3	0.6	0.7
70414	52.7N	174.1E	29	MS	43	39	91	0	0.5	0.2	0.5
71060	52.5N	116.1W	230	MS	123	123	100	0			
71181	47.1N	55.3W	29	MS	123	0	0	0	0.6	-5.6	5.6
71581	45.5N	78.3W	330	MS	122	0	0	0	0.4	-8.2	8.2
71979	53.8N	118.4W	1542	MS	103	0	0	0	0.6	10.1	10.1
72219	33.6N	84.4W	312	MS	121	112	93	0	0.7	1.4	1.6
72254	30.3N	97.8W	198	MS	122	112	92	0	0.3	2.1	2.1
72376	35.2N	111.8W	2181	MS	122	9	7	0	1.3	-4.3	4.5
72509	42.4N	71.0W	6	MS	120	0	0	93	1.5	-4.7	4.9
72518	42.7N	73.8W	96	MS	122	113	93	0	0.5	0.4	0.6
72656	43.4N	99.8W	619	MS	122	113	93	0	0.5	0.0	0.5
76055	31.0N	114.9W	440	MS	40	40	100	0			
76225	28.6N	106.1W	1435	MS	85	0	0	0	0.6	-4.2	4.2
76382	25.5N	103.5W	1124	MS	69	0	0	0	0.7	4.8	4.9
76543	22.0N	98.8W	104	MS	26	0	0	0	0.7	9.6	9.6
76658	19.2N	103.7W	494	MS	27	0	0	0	0.5	7.2	7.2
76683	19.3N	98.3W	2248	MS	101	0	0	0	0.6	4.0	4.0
76687	19.5N	96.9W	1389	MS	105	1	1	0	0.6	4.0	4.0

76762	17.5N	99.5W	1265	MS	96	1	1	0	0.6	5.9	5.9
76843	16.8N	93.1W	528	MS	109	1	1	2	1.3	-4.8	5.0
78526	18.4N	66.0W	3	MS	122	113	93	0	0.6	1.2	1.3
78543	18.3N	65.0W	3	MS	122	113	93	0	0.6	0.9	1.1
78627	15.3N	91.5W	1901	S	61	1	2	0	0.7	5.6	5.6

WMO REGION 5:

STATION	LAT	LONG	HT(M)	RP	NOBS	NGE	PGE	%REJ	SD	BIAS	RMS
91212	13.5N	144.8E	75	MS	123	113	92	0	0.3	0.2	0.4
94130	14.8S	131.9E	120	MS	92	0	0	99	0.4	5.7	5.7
97284	8.6S	120.5E	1170	S8	90	0	0	0	0.7	4.6	4.7

WMO REGION 6:

STATION	LAT	LONG	HT(M)	RP	NOBS	NGE	PGE	%REJ	SD	BIAS	RMS
01360	61.9N	7.9E	711	MS	95	0	0	0	0.6	5.5	5.5
02324	62.0N	14.2E	432	MS	122	0	0	54	4.2	4.9	6.5
04208	74.0N	57.8W	40	MS	60	60	100	0			
04330	74.3N	20.2W	44	MS	119	0	0	0	0.9	-5.0	5.1
04416	72.6N	38.4W	3202	S	122	1	1	1	0.7	5.9	5.9
06239	54.9N	44.7E	49	MS	369	9	2	0	7.1	-1.7	7.3
08226	40.7N	3.2W	639	MS	64	0	0	0	0.6	-5.0	5.0
08912	42.9N	0.8W	1434	MS	122	122	100	0			
08922	42.8N	0.2W	1660	MS	122	122	100	0			
10850	48.8N	10.7E	457	MS	367	0	0	0	0.4	-5.5	5.5
13269	44.3N	19.9E	176	MS	121	0	0	0	0.7	7.7	7.7
14554	44.9N	18.4E	136	S	60	2	3	0	0.6	-13.0	13.0
16344	39.3N	16.4E	1710	S8	350	0	0	0	1.0	5.0	5.1
17521	35.2N	33.5E	285	MS	93	93	100	0			

ANTARCTIC:

STATION	LAT	LONG	HT(M)	RP	NOBS	NGE	PGE	%REJ	SD	BIAS	RMS
89004	71.7S	2.8W	815	MS	60	2	3	7	2.2	-7.3	7.6
89266	72.2S	60.2W	91	S	324	323	100	0			
89269	64.8S	64.1W	8	MS	121	121	100	54			
89272	74.8S	70.5W	1395	MS	320	320	100	0			
89512	70.8S	11.8E	140	MS	123	1	1	1	2.2	-4.4	4.9
89610	65.9S	113.1E	90	S	333	0	0	0	1.2	-7.8	7.9
89614	66.7S	111.5E	500	S	335	335	100	0			
89661	73.5S	169.8E	200	S	415	414	100	0			
89666	76.7S	163.0E	200	S	404	2	0	0	1.4	6.6	6.7
89769	78.5S	168.4E	50	S	840	0	0	0	2.4	-4.8	5.4
89811	66.7S	112.5E	1366	S	346	0	0	0	1.2	-4.6	4.8
89828	75.1S	123.4E	3250	S	269	0	0	4	2.4	5.0	5.5
89879	71.9S	171.1E	30	MS	193	1	1	13	1.8	-6.8	7.0

TABLE 4A

MONTHLY MONITORING OF AIRCRAFT OBSERVATIONS
MONITORING CENTRE: EXETER
MONTH: Aug 2006

Monitoring procedures

Period		:One calendar month.
Data monitored		:Statistics for each airline carrier.
Area monitored		:90°N - 90°S, 180°W - 180°E.
Standard of comparison		:Background field from UKMO global model.
Observation times		:All hours combined.
Level(s) monitored		:300.0 - 150.0 hPa
Elements monitored		:TEMP in °C ; WIND in m s^{-1}
Parameters monitored		
	:N REP.	:Number of observations received excluding duplicates.
	:PG	:Percentage of observations with gross errors.
	:PR	:Percentage of observations rejected by quality control including rejections from the duplicate check.
	:PC	:Percentage of observations with calm winds.
	:RMS	:Root Mean Square difference of observations from background values excluding those with gross errors in Temperature & vector wind.
	:BIAS	:Mean difference of observations from background values excluding those with gross errors in Temperature & Wind Speed.
GROSS ERROR LIMITS		:10.0 °C ; 60 m s^{-1} Vector Wind
SELECTION CRITERIA		:N REP $\geq$ 20

	TEMPERATURE					WIND					
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
AAH	1536	0	7	1.1	0.2	1531	0	7	0	4.7	0.1
AAL	7852	0	6	1.3	0.0	7360	0	5	0	4.5	0.3
AAR	855	1	3	1.4	-0.6	821	0	5	0	7.3	0.0
ACA	3170	0	9	1.6	0.0	2672	0	9	0	5.9	0.5
ACF	41	0	39	2.9	0.1	27	0	48	0	17.0	-2.3
ACI	164	0	12	0.9	0.1	164	0	13	0	7.5	-1.5
AEA	1005	0	3	1.6	0.6	840	0	5	0	6.7	0.5
AFL	628	0	6	2.1	0.5	368	1	9	0	10.0	0.4
AFR	5146	0	4	1.3	0.1	4975	0	3	0	4.8	0.2
AFZ	37286	0	11	1.5	1.0	37286	0	11	0	6.0	0.6
AJM	278	0	10	1.2	-0.4	226	0	12	0	10.9	0.0
AJX	30	0	10	1.9	0.7	29	0	10	0	9.0	0.6
AMT	1794	0	4	1.1	-0.2	1760	0	4	0	4.7	0.0
AMX	503	2	6	1.4	0.3	429	0	4	0	8.1	0.3
ANA	44	0	7	1.5	0.5	43	0	9	0	6.7	0.4
ANZ	7734	0	30	1.3	0.4	7711	0	30	0	7.1	-0.6
ATN	105	1	100	4.2	-2.3	96	0	7	0	9.7	0.8
AUA	497	0	3	1.3	0.3	482	0	3	0	4.2	0.6
AVA	532	0	2	1.1	0.1	528	0	5	0	7.2	0.4
AVN	155	0	46	0.9	0.0	155	0	71	0	6.5	0.3
AWE	932	0	2	1.1	-0.6	926	0	2	0	4.6	0.2
AXF	26	0	31	1.5	0.3	28	0	39	0	11.6	-2.2
AZA	671	0	5	1.9	0.7	539	0	4	0	6.9	0.2
BAW	782	1	25	2.0	-0.6	508	0	23	0	8.8	-0.2
BBR	147	0	3	1.9	0.9	138	0	3	0	5.9	0.6
BHP	67	0	3	2.0	-0.9	53	0	13	0	15.7	-4.1
BMA	374	0	2	1.4	-0.2	358	0	1	0	4.0	0.5
BPA	476	1	15	1.9	0.2	445	0	10	0	8.8	0.0
BSK	57	0	11	1.6	0.1	41	0	12	0	8.3	-1.1
BWA	314	0	2	1.3	-0.4	262	0	2	0	6.4	0.8
CAL	74	0	5	1.3	-0.3	73	0	10	0	8.6	0.7
CCA	187	2	8	2.5	0.1	163	0	100	0	10.0	-0.5
CES	751	1	5	1.7	-0.2	744	0	8	0	8.7	0.5
CFC	65	0	8	2.2	-1.0	62	0	10	0	9.3	0.2
CFG	968	0	5	1.5	-0.1	745	0	6	0	9.1	0.1
CFY	58	0	3	1.5	-0.8	56	0	4	0	3.4	1.2
CGD	46	0	2	1.4	-0.3	43	0	2	0	3.6	0.3
CGF	482	0	8	2.2	0.3	447	0	0	0	3.6	0.6
CGH	595	0	1	1.4	-0.1	553	0	1	0	3.5	0.8
CKK	130	1	5	1.5	0.4	130	0	5	0	5.8	0.1
CKS	188	0	6	1.7	0.0	164	0	10	0	7.4	0.0
CLX	285	1	9	1.9	-0.5	135	1	14	0	11.0	-0.8
CNJ	41510	0	73	1.1	0.4	41510	0	73	0	4.4	0.3
COA	4896	0	8	1.3	0.0	4658	0	7	0	4.7	0.5
CRL	493	0	4	1.4	0.1	467	0	5	0	7.4	0.4
CSD	55	0	4	1.9	1.1	27	0	0	0	5.1	0.7
CSN	145	0	5	1.6	-0.2	144	0	8	0	9.6	1.0
CUB	341	1	8	1.8	-0.2	256	0	100	0	8.7	0.9
DAB	1236	0	5	1.5	-0.4	1138	0	5	0	4.0	0.6
DAF	22	0	0	1.7	0.0	20	0	0	0	4.7	-0.4
DAI	1440	0	10	1.3	0.1	1326	0	10	0	3.8	0.6
DAL	4788	0	29	1.6	0.3	4542	0	29	0	4.4	0.3
DLH	5804	0	6	1.3	0.1	5616	0	6	0	4.4	0.4
DRD	652	1	2	1.5	-0.3	646	0	2	0	6.0	0.7
EDW	82	0	6	1.2	-0.2	61	2	8	0	7.2	1.4
EEZ	202	2	12	1.7	0.0	164	0	9	0	8.8	0.2
EIA	250	0	8	2.2	0.3	235	0	100	0	20.7	3.9
ELY	460	0	3	1.3	0.3	418	0	3	0	5.4	0.1
ETH	78	0	10	1.5	0.3	47	0	9	0	8.9	0.3

	TEMPERATURE					WIND					
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
EVA	398	1	4	1.4	-0.2	396	0	6	0	8.7	0.1
FCA	279	0	8	1.4	0.2	217	1	5	0	7.7	0.8
FDX	650	1	28	1.2	0.0	539	0	28	0	6.5	0.6
FGE	81	0	0	1.4	-0.4	73	0	0	0	4.1	0.1
FGI	331	0	2	1.3	-0.4	316	0	2	0	3.9	0.3
FGL	100	0	3	1.1	0.3	96	0	3	0	3.9	0.8
FGN	35	0	11	1.8	0.9	35	0	11	0	4.6	1.0
FGS	503	0	6	1.2	0.1	480	0	6	0	3.7	0.7
FGZ	82	0	1	1.1	-0.2	81	0	1	0	3.7	0.7
FIN	380	0	4	1.7	0.1	312	0	6	0	9.9	-0.3
FJI	975	2	36	2.0	0.6	970	2	32	0	6.9	0.7
FOJ	54	0	2	1.6	-0.5	50	0	0	0	3.8	0.7
FOM	759	0	45	1.3	-0.1	756	1	46	0	5.8	-0.1
FOS	54	0	2	1.7	-0.9	47	0	2	0	4.6	1.3
FWI	882	1	7	1.3	-0.4	863	0	6	0	6.9	0.6
GCO	155	0	8	1.4	0.0	133	0	55	0	8.3	1.6
GEC	448	0	19	1.5	0.1	419	0	18	0	9.5	0.6
GGC	183	1	2	1.6	0.5	186	1	4	0	7.6	0.3
GLO	22	0	41	2.8	-0.4	22	0	36	0	14.8	1.4
GOJ	177	0	1	1.2	0.4	167	0	1	0	3.5	0.7
GRL	135	0	1	1.7	0.2	132	0	1	0	5.0	0.6
GSM	59	3	7	1.8	-0.8	31	0	3	0	8.5	-0.4
GTI	203	0	5	1.6	0.3	139	0	1	0	6.1	0.5
GVA	44	0	0	1.1	-0.3	38	0	0	0	3.7	0.3
GVB	78	0	0	1.3	-0.1	71	0	0	0	4.2	0.2
GVE	25	0	0	1.2	0.1	25	0	0	0	2.7	0.8
GVF	127	0	2	1.3	-0.2	117	0	1	0	4.3	0.3
GVG	36	0	0	1.5	-0.9	35	0	0	0	3.5	1.3
GVH	78	0	1	1.3	-0.4	73	0	1	0	4.1	1.0
GVL	41	0	5	1.5	-0.4	40	0	5	0	4.0	0.6
GVO	26	0	0	1.7	-1.2	23	0	0	0	4.3	1.0
GVR	199	0	3	1.3	-0.2	179	0	4	0	4.9	0.4
GVT	53	0	4	1.3	-0.1	50	0	4	0	3.6	0.5
GVW	80	0	4	1.4	-0.4	67	0	3	0	4.6	0.6
GVX	49	0	6	1.4	0.1	43	0	7	0	4.7	0.3
GWW	147	0	1	1.3	-0.4	134	0	1	0	3.4	0.4
HAL	3076	0	9	1.6	0.3	3065	0	9	0	5.7	-0.1
HBI	263	0	5	1.3	-0.5	249	0	4	0	3.9	0.2
HBJ	161	0	2	1.5	-0.7	156	0	3	0	3.9	0.8
HMY	49	2	8	0.9	-0.3	49	0	6	0	5.8	0.5
IBE	4576	0	4	1.3	0.0	4487	0	3	0	6.8	0.6
ICE	1156	0	4	1.6	-0.2	718	0	4	0	8.5	-0.5
ILI	40	0	5	0.8	0.2	38	0	5	0	3.5	0.7
ISR	45	2	4	1.2	0.1	22	0	0	0	5.7	1.9
IWD	996	1	2	1.1	0.0	984	0	2	0	5.3	0.6
JAL	758	0	6	1.7	0.1	748	0	6	0	7.8	0.8
JAZ	877	0	3	1.2	0.4	872	0	4	0	6.7	0.5
JST	586	0	26	1.7	-0.5	586	0	25	0	5.5	0.0
KAC	110	0	3	1.1	0.3	108	0	3	0	4.4	0.3
KAL	1169	0	3	1.5	-0.1	1162	0	3	0	6.2	0.1
KIW	34	0	44	0.7	-0.3	34	0	44	0	5.4	1.0
KLM	1769	0	9	1.5	-0.1	1375	0	11	0	9.0	-0.1
LAN	889	0	2	1.4	0.2	883	0	3	0	4.5	0.3
LCO	27	4	15	1.2	-0.3	21	5	10	0	6.6	0.7
LNE	282	0	2	1.4	-0.1	281	0	2	0	7.0	0.7
LNR	458	0	47	1.5	-0.5	404	0	47	0	4.1	0.7
LOT	425	0	3	1.9	-0.8	287	0	6	0	8.8	-0.2
LTE	38	0	0	1.4	0.5	36	0	0	0	4.4	0.4
LTU	637	0	4	1.3	-0.4	603	0	3	0	5.4	0.4

		TEMPERATURE						WIND			
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
LVG	206	0	5	1.2	0.0	193	0	3	0	4.9	1.3
MAS	398	0	5	1.3	0.1	386	0	5	0	5.8	-0.2
MEA	38	8	13	2.0	-0.1	31	0	0	0	5.0	-1.1
MMZ	386	1	2	1.3	0.2	385	0	1	0	5.9	0.9
MON	92	0	2	1.5	-0.2	68	0	6	0	6.7	0.3
MPD	1203	1	4	1.4	0.0	1169	0	3	0	6.5	0.7
MPH	208	1	7	1.7	-0.8	162	0	6	0	9.9	-0.4
MSR	212	0	1	1.1	0.4	201	0	1	0	4.2	0.4
MXA	28	0	7	2.0	-0.4	28	0	21	0	16.6	-3.7
MXJ	310	0	9	2.0	0.0	156	0	4	0	6.1	-0.7
MYT	329	1	5	1.1	-0.2	262	0	6	0	6.7	0.5
NAO	215	0	4	1.5	-0.1	191	0	6	0	8.0	0.4
NAT	21	0	5	1.6	-0.6	20	0	0	0	6.2	-0.1
NCA	296	0	2	1.7	-0.2	220	0	2	0	8.1	0.5
NOS	242	0	7	1.9	0.0	167	0	4	0	6.7	0.2
NWA	8342	0	7	1.5	-0.1	8072	0	7	0	6.6	0.5
NZL	7361	0	10	1.2	0.0	7361	0	10	0	4.3	0.0
OAE	548	0	9	1.6	-0.2	357	0	13	0	9.1	0.8
OEL	190	0	4	1.4	0.2	173	0	3	0	3.4	0.4
OOM	190	1	6	2.0	-0.4	133	0	8	0	9.4	-0.7
OYK	669	0	52	1.4	-0.3	594	0	52	0	3.8	0.6
PAC	278	0	3	1.8	-0.6	256	0	1	0	6.1	0.3
PAL	1499	0	2	1.4	-0.3	1481	0	5	0	7.3	0.2
PBI	1284	0	45	1.2	0.2	1281	1	46	0	6.9	0.3
PCE	27	0	4	1.6	0.2	23	0	0	0	4.8	0.2
PHB	32	0	13	1.2	0.2	32	0	13	0	3.9	0.7
PLM	637	1	5	1.8	0.8	589	0	4	0	6.9	0.4
QFA	4316	0	45	1.3	0.2	4313	0	45	0	5.7	-0.8
RAM	731	0	4	1.4	-0.1	568	0	7	0	8.5	0.2
RCH	392	1	100	3.2	-0.6	248	0	45	0	8.6	1.5
RJA	63	3	5	1.2	-0.3	38	0	3	0	6.4	-0.1
RRR	61	5	8	2.0	0.5	60	0	2	0	5.4	0.7
RZO	1247	1	5	1.6	-0.6	1178	0	3	0	7.2	0.8
SAS	1090	0	63	1.4	-0.2	1051	0	63	0	4.1	0.7
SER	385	0	53	1.4	0.1	343	0	52	0	3.6	0.6
SEU	190	0	12	1.9	-0.1	167	0	8	0	8.9	1.1
SIA	635	0	3	1.3	0.1	625	0	2	0	4.2	0.2
SLM	164	1	2	1.3	-0.6	162	0	0	0	4.7	0.9
SOO	45	0	0	1.6	1.0	45	0	0	0	5.9	1.1
SQC	254	0	0	1.2	-0.1	249	0	0	0	5.4	-0.1
SSV	48	0	6	1.2	0.3	44	0	5	0	8.9	-1.4
SUG	39	0	8	1.0	0.2	39	0	8	0	3.6	0.4
SVH	512	0	9	1.0	0.7	512	0	10	0	3.4	0.5
SWR	1771	0	5	1.3	-0.6	1721	0	5	0	4.3	0.6
TAG	55	0	2	2.3	0.2	41	0	5	0	8.6	0.8
TAM	42	0	36	1.5	0.1	40	0	38	0	13.8	4.4
TAP	1282	1	4	1.5	-0.3	1192	0	3	0	6.0	0.6
TCV	87	0	100	3.3	3.2	84	0	5	0	7.4	1.5
TCX	296	0	4	1.1	0.0	260	0	5	0	5.2	1.0
TFL	154	0	7	1.4	-0.3	113	0	8	0	8.9	0.6
THA	190	0	7	1.3	0.5	190	0	7	0	4.3	-0.3
THT	1825	0	26	1.0	0.2	1822	0	27	0	8.0	-3.2
TOM	471	1	9	1.5	0.0	442	0	6	0	8.0	0.7
TSC	526	1	6	1.8	-0.8	306	0	3	0	6.8	0.0
TUB	108	0	12	1.2	0.3	85	0	11	0	9.6	0.2
UAE	1160	0	6	1.3	0.3	1145	0	6	0	3.9	0.4
UAL	11992	0	18	1.3	-0.2	11932	0	18	0	5.1	0.2
UPS	1433	0	51	1.3	0.0	941	0	50	0	6.1	0.3
USA	1413	0	3	1.2	0.0	1326	0	2	0	4.7	0.5

	TEMPERATURE					WIND					
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
VIR	2459	0	3	1.3	-0.1	2368	0	3	0	4.5	0.1
VLE	94	1	9	1.8	-1.4	87	0	8	0	6.9	-0.1
VVJ	27	4	11	1.3	-0.8	26	0	12	0	9.7	1.5
VVR	52	0	0	1.8	0.5	52	0	0	0	7.1	1.1
WHT	140	0	3	0.9	0.0	118	0	5	0	6.4	0.9
WOA	208	2	5	1.3	-0.2	197	0	4	0	6.3	0.5
XLA	83	0	6	1.8	0.1	75	0	9	0	8.7	1.5
ZKN	119	0	3	1.4	0.1	109	0	3	0	4.7	0.4
ZKS	44	0	2	1.1	-0.2	44	0	2	0	5.6	0.7
4XE	173	0	2	1.5	0.5	152	0	3	0	4.1	0.2
9MM	91	0	2	1.5	0.5	81	0	1	0	4.2	1.3
9VS	129	0	5	1.3	0.0	121	0	5	0	4.6	0.3

	TEMPERATURE					WIND					
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
AU	49273	0	15	1.1	0.4	49279	0	15	0	4.8	0.3
EU	311122	0	28	1.3	0.2	311120	0	27	0	4.4	0.3
HK	7476	0	8	1.0	0.1	7476	0	8	0	4.8	0.2
JP	74248	0	68	1.2	0.6	74248	0	67	0	4.6	0.4
MK	2030	0	3	1.2	1.0	2030	0	3	0	7.1	0.8
SA	3320	0	13	1.1	0.1	3320	0	13	0	5.7	0.6
UA	313517	0	99	1.0	-0.1	313393	0	99	0	4.2	0.3

	TEMPERATURE					WIND					
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
A	282	0	4	1.5	0.2	247	0	4	0	4.9	0.4
N	6801	0	13	1.5	-0.2	6361	0	12	0	4.3	0.6

	TEMPERATURE					WIND					
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
US AMDAR	1278978	0	67	1.1	0.3	1278969	0	67	0	4.6	0.5

TABLE 4B

MONTHLY MONITORING OF AIRCRAFT OBSERVATIONS
MONITORING CENTRE: EXETER
MONTH: Aug 2006

Monitoring procedures

Period :One calendar month.

Data monitored :Statistics for each airline carrier.

Area monitored :90°N - 90°S, 180°W - 180°E.

Standard of comparison :Background field from UKMO global model.

Observation times :All hours combined.

Level(s) monitored :1000.0 – 300.1 hPa

Elements monitored :TEMP in °C ; WIND in m s^{-1}

Parameters monitored

:N REP. :Number of observations received excluding duplicates.

:PG :Percentage of observations with gross errors.

:PR :Percentage of observations rejected by quality control including rejections from the duplicate check.

:PC :Percentage of observations with calm winds.

:RMS :Root Mean Square difference of observations from background values excluding those with gross errors in Temperature & vector wind.

:BIAS :Mean difference of observations from background values excluding those with gross errors in Temperature & Wind Speed.

GROSS ERROR LIMITS :10.0 °C ; 60 m s^{-1} Vector Wind

SELECTION CRITERIA :N REP $\geq$ 20

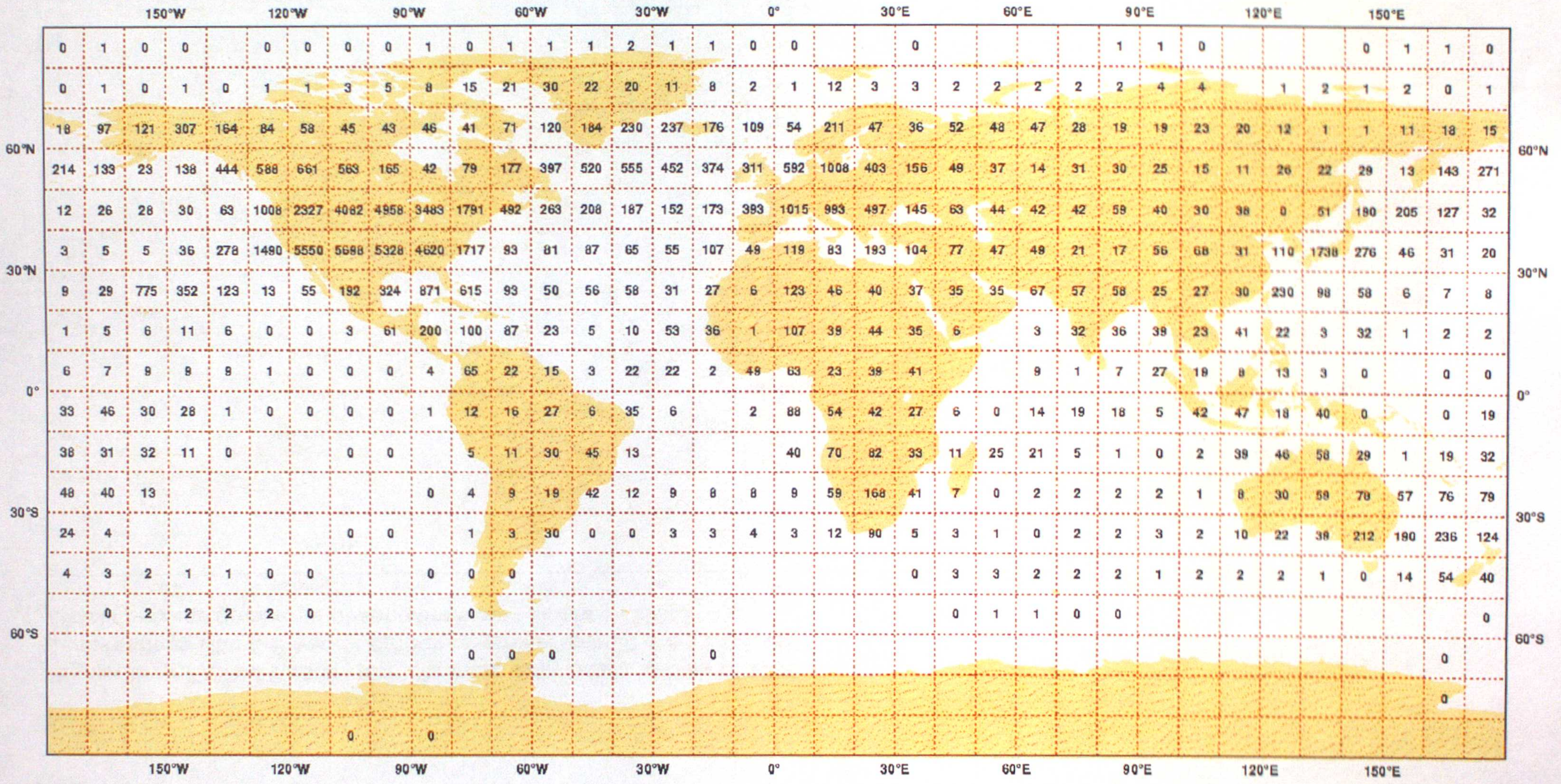
	TEMPERATURE					WIND					
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
AAL	47	0	15	1.8	-0.6	38	0	18	0	10.4	1.9
ACA	52	2	12	1.3	0.4	46	0	28	0	16.1	5.7
ACI	20	0	10	1.2	0.7	20	0	10	0	6.4	-1.3
AFR	51	0	12	1.0	0.2	49	0	14	0	7.9	-1.6
AFZ	45372	0	68	1.3	-0.3	45372	0	68	0	4.3	0.1
AMT	32	0	0	1.3	-0.4	29	0	7	0	10.4	1.2
ANZ	298	0	8	1.1	0.5	305	0	10	0	4.7	0.2
AXF	51	0	57	1.3	0.5	54	0	65	0	15.9	-3.8
CFC	97	1	7	1.4	0.6	88	0	7	0	6.1	-0.6
CKS	43	2	12	1.9	-0.2	26	0	12	0	7.3	0.2
CNJ	867996	0	85	1.7	0.5	867996	0	85	0	4.6	0.1
COA	47	0	11	1.2	-0.2	46	0	11	0	4.8	1.3
DAF	21	0	10	1.2	0.2	21	0	19	0	10.7	2.8
DAL	44	0	30	2.3	-0.4	38	0	21	0	5.7	1.1
FDX	285	0	25	1.5	0.0	143	0	20	0	5.6	0.9
FXI	72	0	1	1.9	0.2	72	0	0	0	5.4	0.9
GAF	93	3	4	0.9	0.1	42	0	2	0	5.6	0.5
GCO	35	0	6	1.8	-0.2	34	0	32	0	12.7	3.3
GEC	160	0	26	1.9	0.0	146	1	29	0	9.4	-0.5
GTI	41	0	5	1.8	-0.2	29	0	3	0	8.3	2.1
HAL	130	1	9	2.1	0.1	130	1	7	0	5.9	1.6
ICE	65	2	8	1.4	-0.4	45	0	16	0	11.2	-1.7
JAL	21	0	10	1.1	0.1	21	0	10	0	5.8	-0.6
JKK	49	6	10	1.8	-0.7	48	0	8	0	12.2	-0.6
KAL	38	0	5	1.3	0.4	38	8	8	0	5.5	0.9
KIW	22	5	45	2.5	0.0	22	0	41	0	6.3	0.2
KLM	57	0	5	1.2	0.1	42	0	10	0	9.6	-0.5
LAN	128	2	30	1.8	-0.3	111	1	25	0	7.9	1.5
MAS	29	0	7	0.9	0.3	29	0	7	0	2.7	-0.3
NWA	153	1	9	1.6	-0.1	148	0	7	0	7.2	0.2
NZL	26665	0	55	0.9	0.1	26651	0	55	0	4.4	0.0
OAE	37	0	5	1.2	-0.2	20	0	15	0	9.0	2.4
PAL	42	0	7	1.4	-0.6	41	0	15	0	4.1	-0.1
QFA	117	1	38	1.6	0.3	117	0	38	0	6.2	0.2
RRR	62	5	8	2.0	0.7	54	0	4	0	7.5	-1.0
SIA	97	0	5	1.0	0.3	98	0	6	0	4.7	1.1
SVH	23094	0	60	1.4	0.5	23094	0	60	0	4.4	0.4
THA	23	0	4	1.4	1.0	23	0	4	0	4.2	-0.2
THT	180	0	48	1.0	0.3	180	0	48	0	7.5	-3.3
TOM	25	0	4	1.5	-0.4	24	0	0	0	4.8	1.0
UAE	100	0	4	1.1	0.7	102	0	4	0	3.8	0.3
UAL	181	4	25	1.4	-0.3	188	0	23	0	7.8	0.3
UPS	184	0	45	1.2	-0.1	99	0	43	0	5.4	0.6
VVR	33	0	3	1.6	-0.9	32	0	0	0	4.4	1.1

	TEMPERATURE					WIND					
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
AU	58085	0	59	1.1	0.5	58169	0	59	0	4.0	0.1
EU	703200	0	67	1.0	0.0	697165	0	66	0	3.7	0.1
HK	22464	0	87	1.1	-0.2	22464	0	87	0	3.9	0.3
JP	312836	0	82	1.1	0.1	312836	0	81	0	3.6	0.6
MK	1069	0	49	1.1	0.3	1069	0	49	0	4.8	1.2
SA	3230	0	71	1.5	0.1	3230	0	71	0	4.8	0.0
UA	260635	0	99	1.0	-0.2	260412	0	99	0	3.6	0.4

	TEMPERATURE					WIND					
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS

			TEMPERATURE					WIND			
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
N	62	6	18	2.1	-0.1	44	0	20	0	8.2	0.9
US AMDAR	1989709	0	81	1.1	0.1	1984594	0	82	0	3.6	0.4

Figure 3a. AIRCRAFT 300 - 150 hPa mean daily count. AUGUST 2006
Observations with O-B vector difference greater than 60 ms-1 excluded
Global average number of observations in 24 hours = 73092



0	1	0	0		0	0	0	0	1	0	1	1	1	2	1	1	0	0			0					1	1	0				0	1	1	0
0	1	0	1	0	1	1	3	5	8	15	21	30	22	20	11	8	2	1	12	3	3	2	2	2	2	2	4	4		1	2	1	2	0	1
18	97	121	307	164	84	58	45	43	46	41	71	120	184	230	237	176	109	54	211	47	36	52	48	47	28	19	19	23	20	12	1	1	11	18	15
214	133	23	138	444	588	661	563	165	42	79	177	397	520	555	452	374	311	592	1008	403	156	49	37	14	31	30	25	15	11	26	22	29	13	143	271
12	26	28	30	63	1008	2327	4062	4958	3483	1791	492	263	208	187	152	173	393	1015	993	497	145	63	44	42	42	59	40	30	38	0	51	190	205	127	32
3	5	5	36	278	1490	5550	5688	5328	4620	1717	93	81	87	65	55	107	49	119	83	193	104	77	47	48	21	17	56	68	31	110	1738	276	46	31	20
9	29	775	352	123	13	55	192	324	871	615	93	50	56	58	31	27	6	123	46	40	37	35	35	67	57	58	25	27	30	230	98	58	6	7	8
1	5	6	11	6	0	0	3	61	200	100	87	23	5	10	53	36	1	107	39	44	35	6		3	32	36	39	23	41	22	3	32	1	2	2
6	7	9	8	9	1	0	0	0	4	65	22	15	3	22	22	2	49	63	23	39	41			9	1	7	27	19	8	13	3	0		0	0
33	46	30	28	1	0	0	0	0	1	12	16	27	6	35	6		2	88	54	42	27	6	0	14	19	18	5	42	47	18	40	0		0	19
38	31	32	11	0			0	0		5	11	30	45	13				40	70	82	33	11	25	21	5	1	0	2	39	46	58	29	1	19	32
48	40	13							0	4	9	19	42	12	9	8	8	9	59	168	41	7	0	2	2	2	2	1	8	30	59	78	57	76	79
24	4						0	0		1	3	30	0	0	3	3	4	3	12	90	5	3	1	0	2	2	3	2	10	22	38	212	190	236	124
4	3	2	1	1	0	0			0	0	0										0	3	3	2	2	2	1	2	2	2	1	0	14	54	40
	0	2	2	2	2	0				0												0	1	1	0	0									0
										0	0	0				0																		0	
																																		0	
							0		0																										

Figure 3b. AIRCRAFT 1000 - 301 hPa mean daily count. AUGUST 2006
Observations with O-B vector difference greater than 60 ms-1 excluded
Global average number of observations in 24 hours = 138910

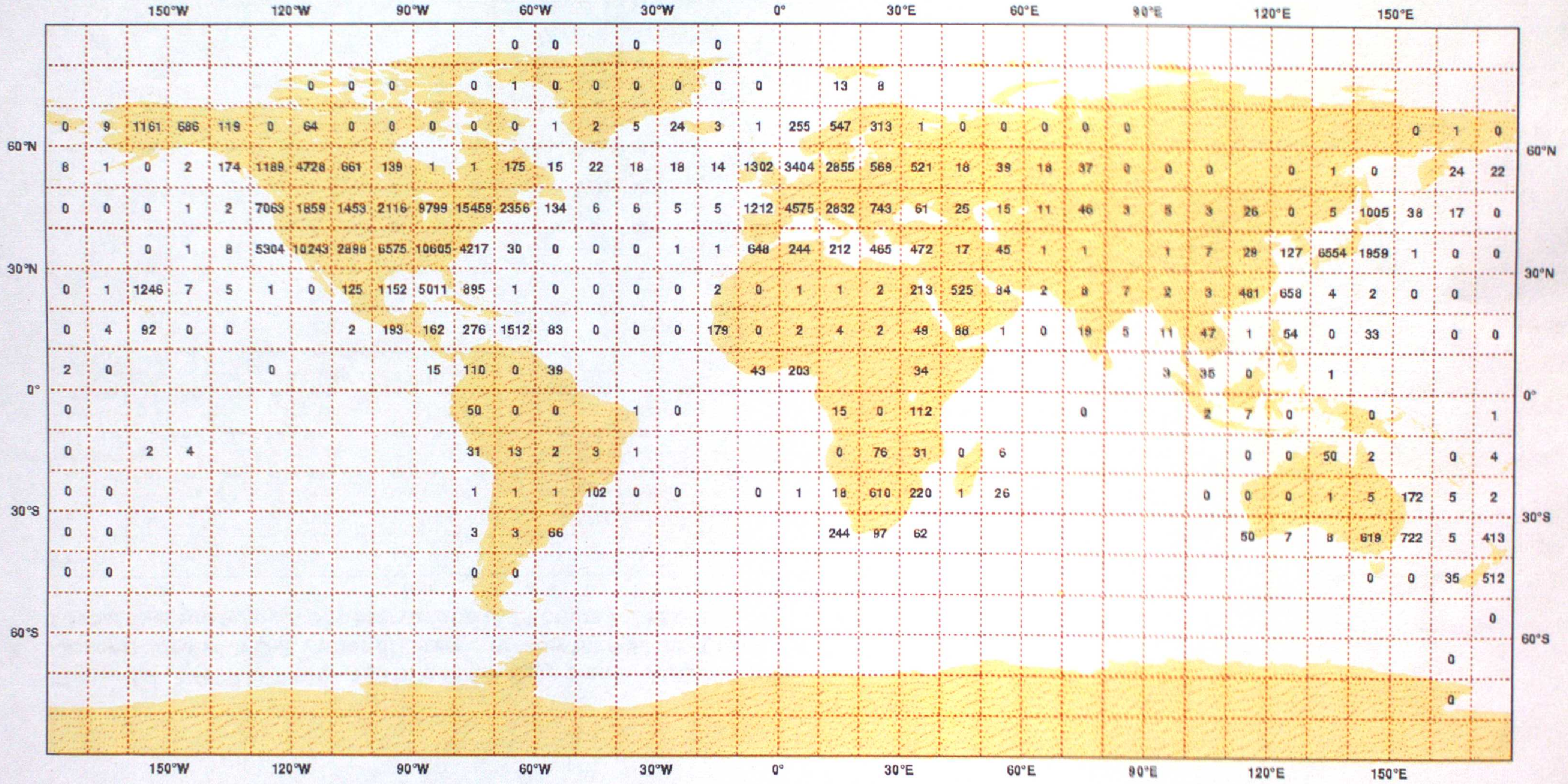

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
0 0 0 0
0 0 0 0 1 0 0 0 0 0 0 13 8
0 9 1161 686 119 0 64 0 0 0 0 0 1 2 5 24 3 1 255 547 313 1 0 0 0 0 0 0 1 0
8 1 0 2 174 1189 4728 661 139 1 1 175 15 22 18 18 14 1302 3404 2855 569 521 18 39 18 37 0 0 0 0 1 0 24 22
0 0 0 1 2 7063 1859 1453 2116 9799 15459 2356 134 6 6 5 5 1212 4575 2832 743 61 25 15 11 46 3 5 3 26 0 5 1005 38 17 0
0 1 8 5304 10243 2898 6575 10605 4217 30 0 0 0 1 1 648 244 212 465 472 17 45 1 1 1 7 29 127 6554 1959 1 0 0
0 1 1246 7 5 1 0 125 1152 5011 895 1 0 0 0 0 2 0 1 1 2 213 525 84 2 8 7 2 3 481 658 4 2 0 0
0 4 92 0 0 2 193 162 276 1512 83 0 0 0 179 0 2 4 2 49 88 1 0 19 5 11 47 1 54 0 33 0 0
2 0 0 15 110 0 39 43 203 34 3 35 0 1
0 50 0 0 1 0 15 0 112 0 2 7 0 0 1
0 2 4 31 13 2 3 1 0 76 31 0 6 0 0 50 2 0 4
0 0 1 1 1 102 0 0 0 1 18 610 220 1 26 0 0 0 1 5 172 5 2
0 0 3 3 66 244 97 62 50 7 8 619 722 5 413
0 0 0 0 0 0 35 512
0
0
0

Figure 4a. AIRCRAFT 300 - 150 hPa mean winds. AUGUST 2006
Observations with O-B vector difference greater than 60 ms-1 excluded
Arrows are plotted where greater than 30 obs are present

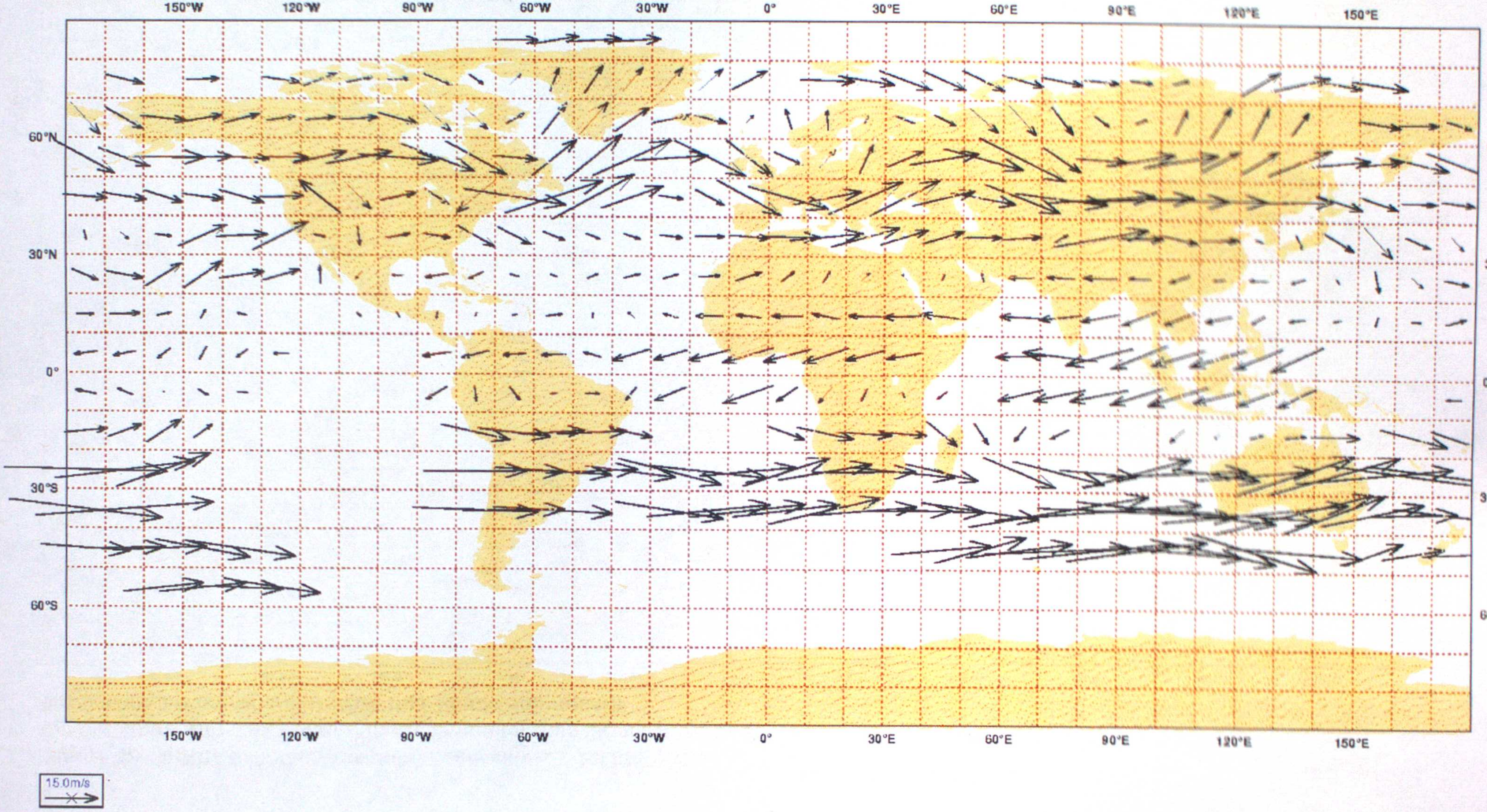

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
15.0m/s

Figure 4b. AIRCRAFT 1000 - 301 hPa mean winds. AUGUST 2006
Observations with O-B vector difference greater than 60 ms-1 excluded
Arrows are plotted where greater than 30 obs are present

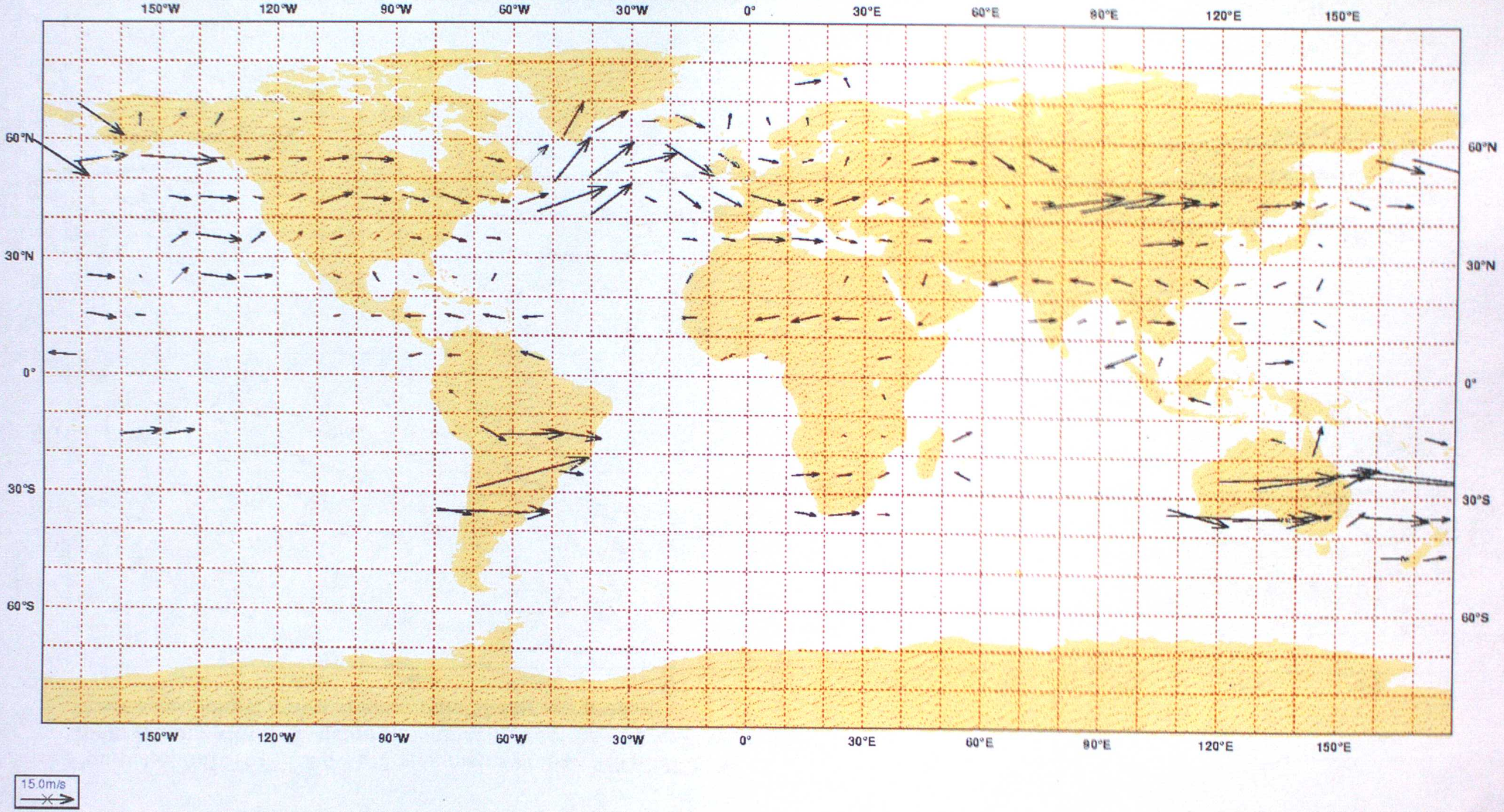

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
15.0m/s

Figure 5a. AIRCRAFT 300 - 150 hPa mean O-B winds. AUGUST 2006
Observations with O-B vector difference greater than 60 ms-1 excluded
Arrows are plotted where greater than 30 obs are present

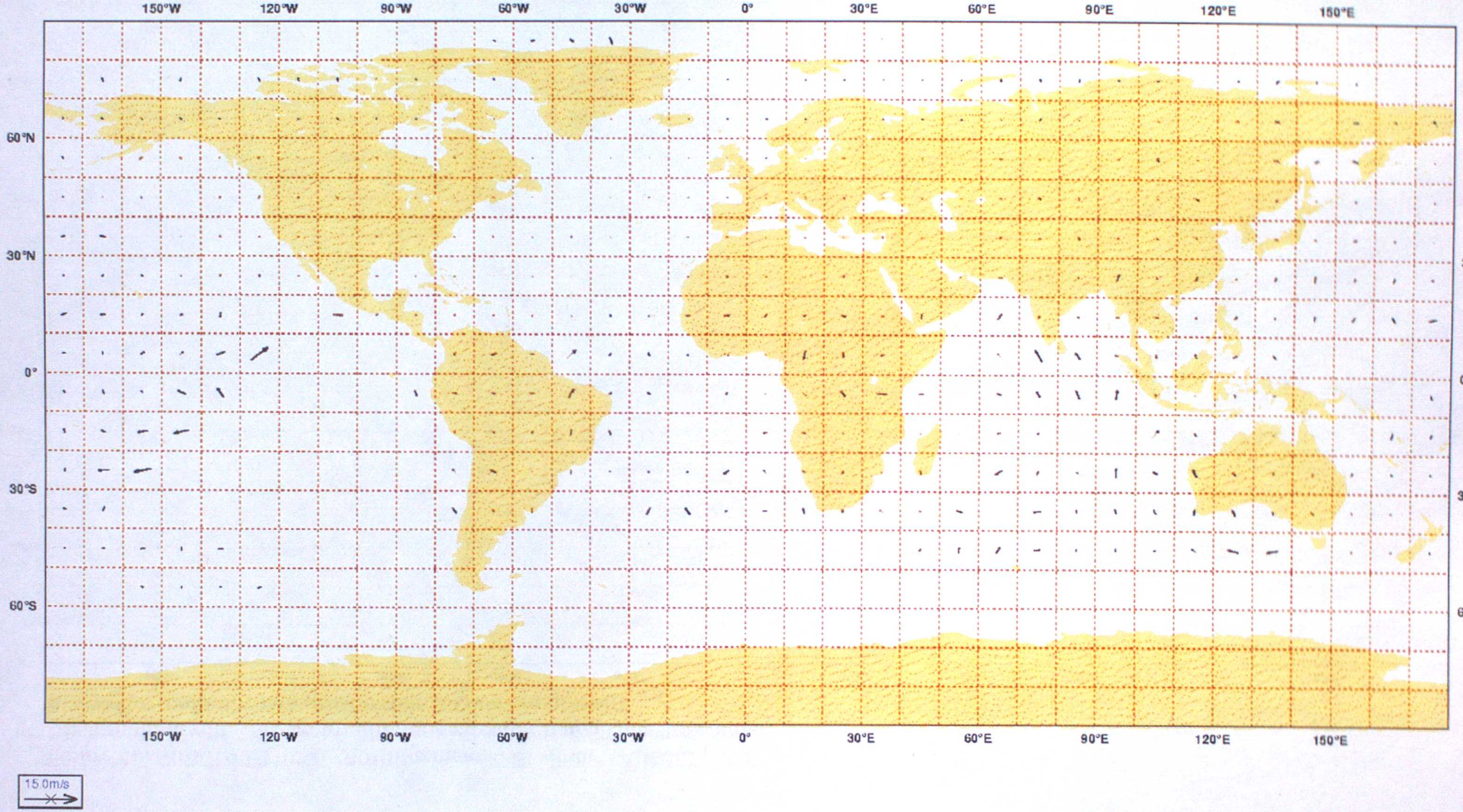

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
15.0m/s

Figure 5b. AIRCRAFT 1000 - 301 hPa mean O-B winds. AUGUST 2006
Observations with O-B vector difference greater than 60 ms-1 excluded
Arrows are plotted where greater than 30 obs are present

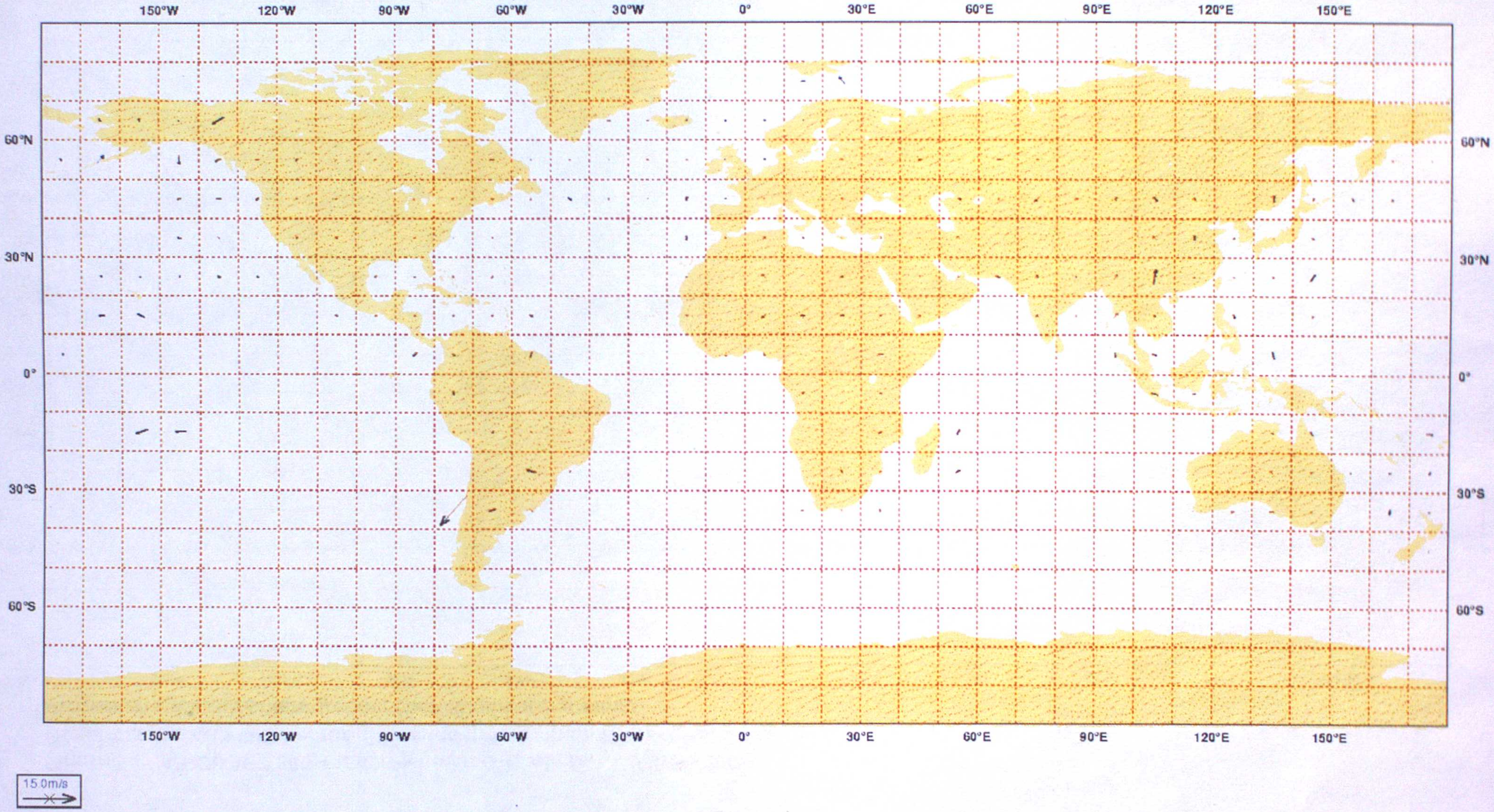
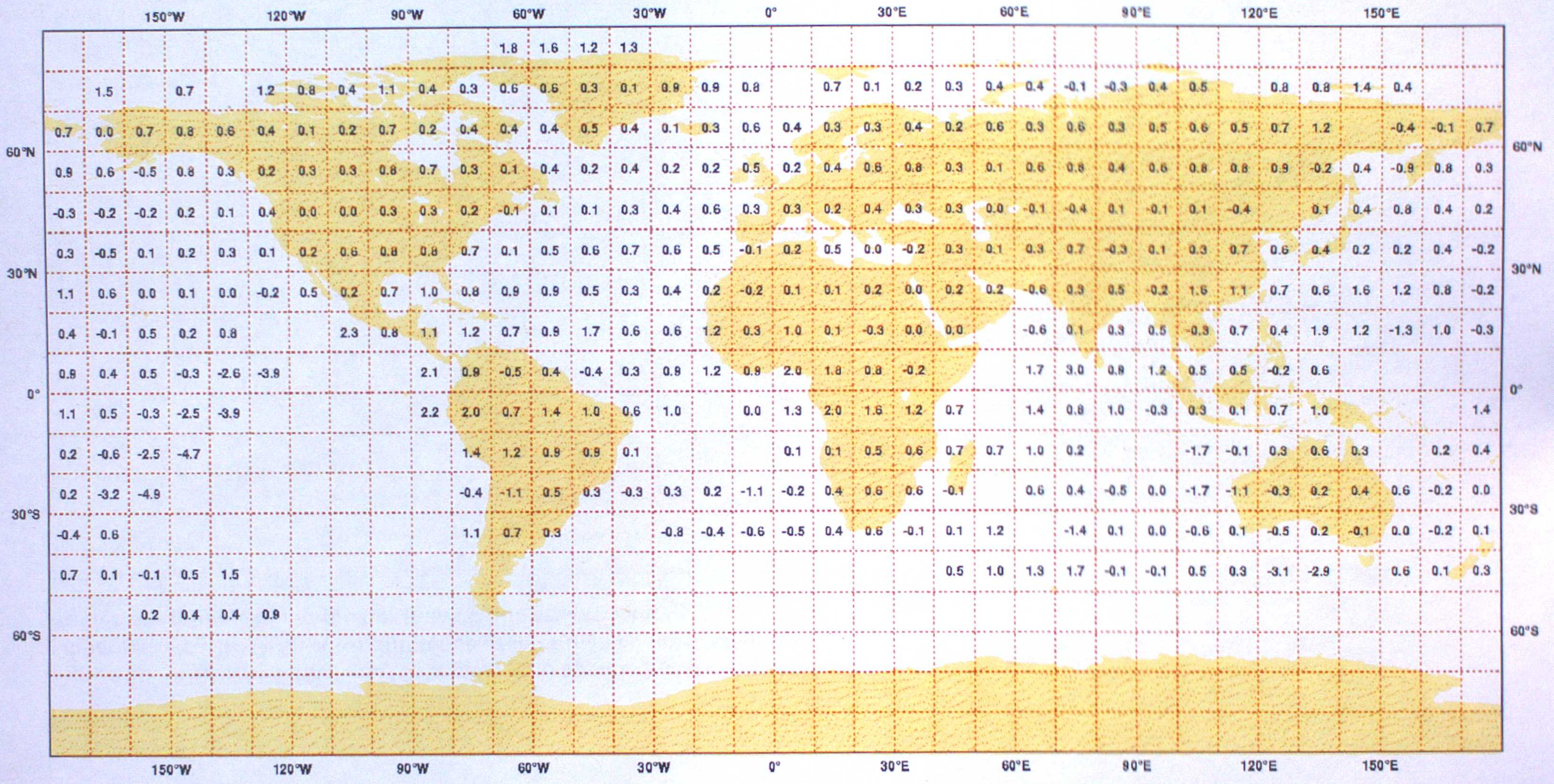

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
15.0m/s

Figure 6a. AIRCRAFT 300 - 150 hPa mean O-B speeds (ms-1). AUGUST 2006
Observations with O-B vector difference greater than 60 ms-1 excluded
Values are printed where greater than 30 obs are present



											1.8	1.6	1.2	1.3																					
	1.5		0.7		1.2	0.8	0.4	1.1	0.4	0.3	0.6	0.6	0.3	0.1	0.9	0.9	0.8		0.7	0.1	0.2	0.3	0.4	0.4	-0.1	-0.3	0.4	0.5		0.8	0.8	1.4	0.4		
0.7	0.0	0.7	0.8	0.6	0.4	0.1	0.2	0.7	0.2	0.4	0.4	0.4	0.5	0.4	0.1	0.3	0.6	0.4	0.3	0.3	0.4	0.2	0.6	0.3	0.6	0.3	0.5	0.6	0.5	0.7	1.2		-0.4	-0.1	0.7
0.9	0.6	-0.5	0.8	0.3	0.2	0.3	0.3	0.8	0.7	0.3	0.1	0.4	0.2	0.4	0.2	0.2	0.5	0.2	0.4	0.6	0.8	0.3	0.1	0.6	0.8	0.4	0.6	0.8	0.8	0.9	-0.2	0.4	-0.9	0.8	0.3
-0.3	-0.2	-0.2	0.2	0.1	0.4	0.0	0.0	0.3	0.3	0.2	-0.1	0.1	0.1	0.3	0.4	0.6	0.3	0.3	0.2	0.4	0.3	0.3	0.0	-0.1	-0.4	0.1	-0.1	0.1	-0.4		0.1	0.4	0.8	0.4	0.2
0.3	-0.5	0.1	0.2	0.3	0.1	0.2	0.6	0.8	0.8	0.7	0.1	0.5	0.6	0.7	0.6	0.5	-0.1	0.2	0.5	0.0	-0.2	0.3	0.1	0.3	0.7	-0.3	0.1	0.3	0.7	0.6	0.4	0.2	0.2	0.4	-0.2
1.1	0.6	0.0	0.1	0.0	-0.2	0.5	0.2	0.7	1.0	0.8	0.9	0.9	0.5	0.3	0.4	0.2	-0.2	0.1	0.1	0.2	0.0	0.2	0.2	-0.6	0.3	0.5	-0.2	1.6	1.1	0.7	0.6	1.6	1.2	0.8	-0.2
0.4	-0.1	0.5	0.2	0.8			2.3	0.8	1.1	1.2	0.7	0.9	1.7	0.6	0.6	1.2	0.3	1.0	0.1	-0.3	0.0	0.0		-0.6	0.1	0.3	0.5	-0.3	0.7	0.4	1.9	1.2	-1.3	1.0	-0.3
0.9	0.4	0.5	-0.3	-2.6	-3.9				2.1	0.9	-0.5	0.4	-0.4	0.3	0.9	1.2	0.9	2.0	1.8	0.8	-0.2			1.7	3.0	0.8	1.2	0.5	0.5	-0.2	0.6				
1.1	0.5	-0.3	-2.5	-3.9					2.2	2.0	0.7	1.4	1.0	0.6	1.0		0.0	1.3	2.0	1.6	1.2	0.7		1.4	0.8	1.0	-0.3	0.3	0.1	0.7	1.0				1.4
0.2	-0.6	-2.5	-4.7							1.4	1.2	0.9	0.9	0.1				0.1	0.1	0.5	0.6	0.7	0.7	1.0	0.2			-1.7	-0.1	0.3	0.6	0.3		0.2	0.4
0.2	-3.2	-4.9								-0.4	-1.1	0.5	0.3	-0.3	0.3	0.2	-1.1	-0.2	0.4	0.6	0.6	-0.1		0.6	0.4	-0.5	0.0	-1.7	-1.1	-0.3	0.2	0.4	0.6	-0.2	0.0
-0.4	0.6									1.1	0.7	0.3			-0.8	-0.4	-0.6	-0.5	0.4	0.6	-0.1	0.1	1.2		-1.4	0.1	0.0	-0.6	0.1	-0.5	0.2	-0.1	0.0	-0.2	0.1
0.7	0.1	-0.1	0.5	1.5																		0.5	1.0	1.3	1.7	-0.1	-0.1	0.5	0.3	-3.1	-2.9		0.6	0.1	0.3
		0.2	0.4	0.4	0.9																														

Figure 6b. AIRCRAFT 1000 - 301 hPa mean O-B speeds (ms-1). AUGUST 2006
Observations with O-B vector difference greater than 60 ms-1 excluded
Values are printed where greater than 30 obs are present

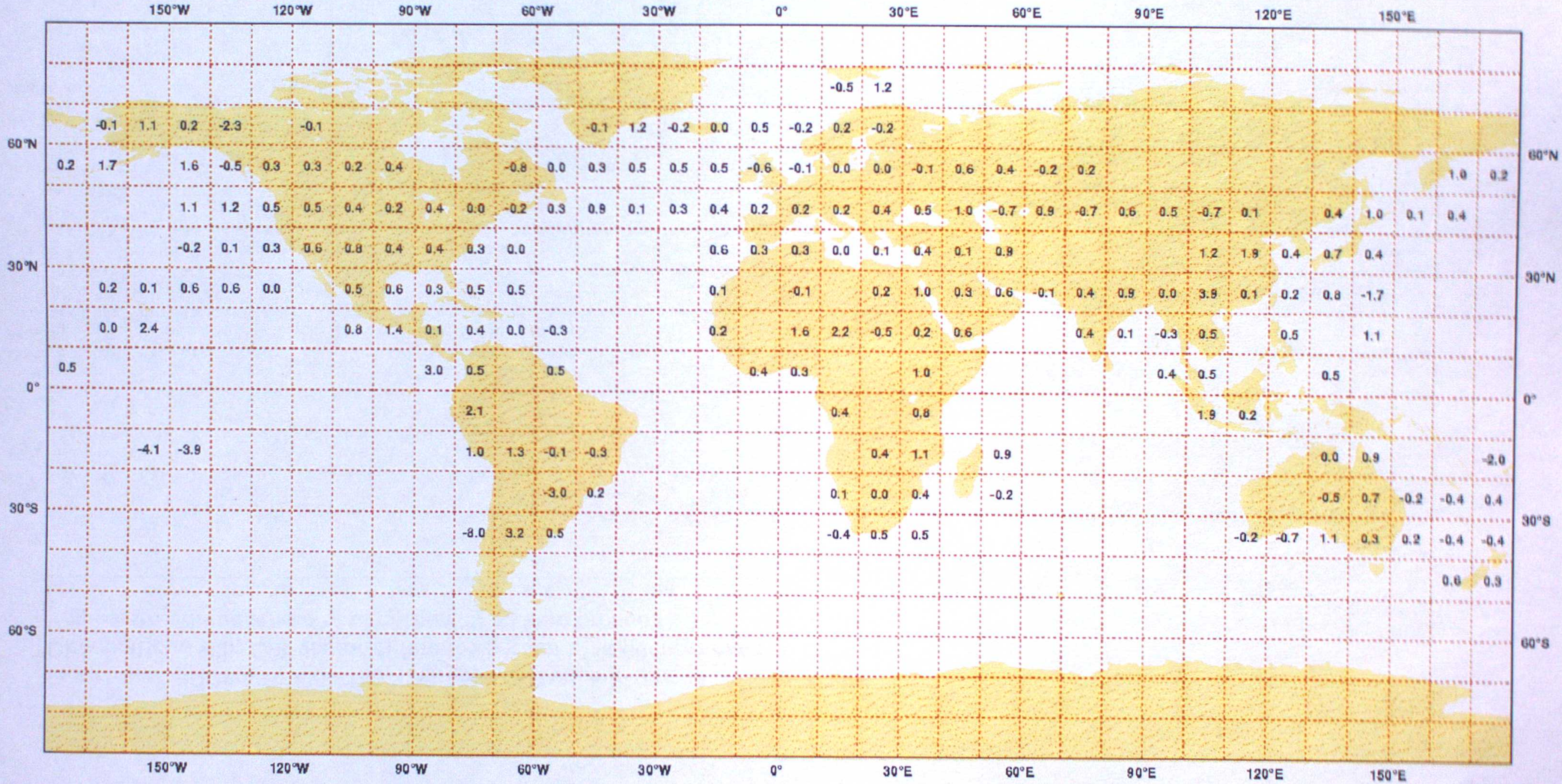
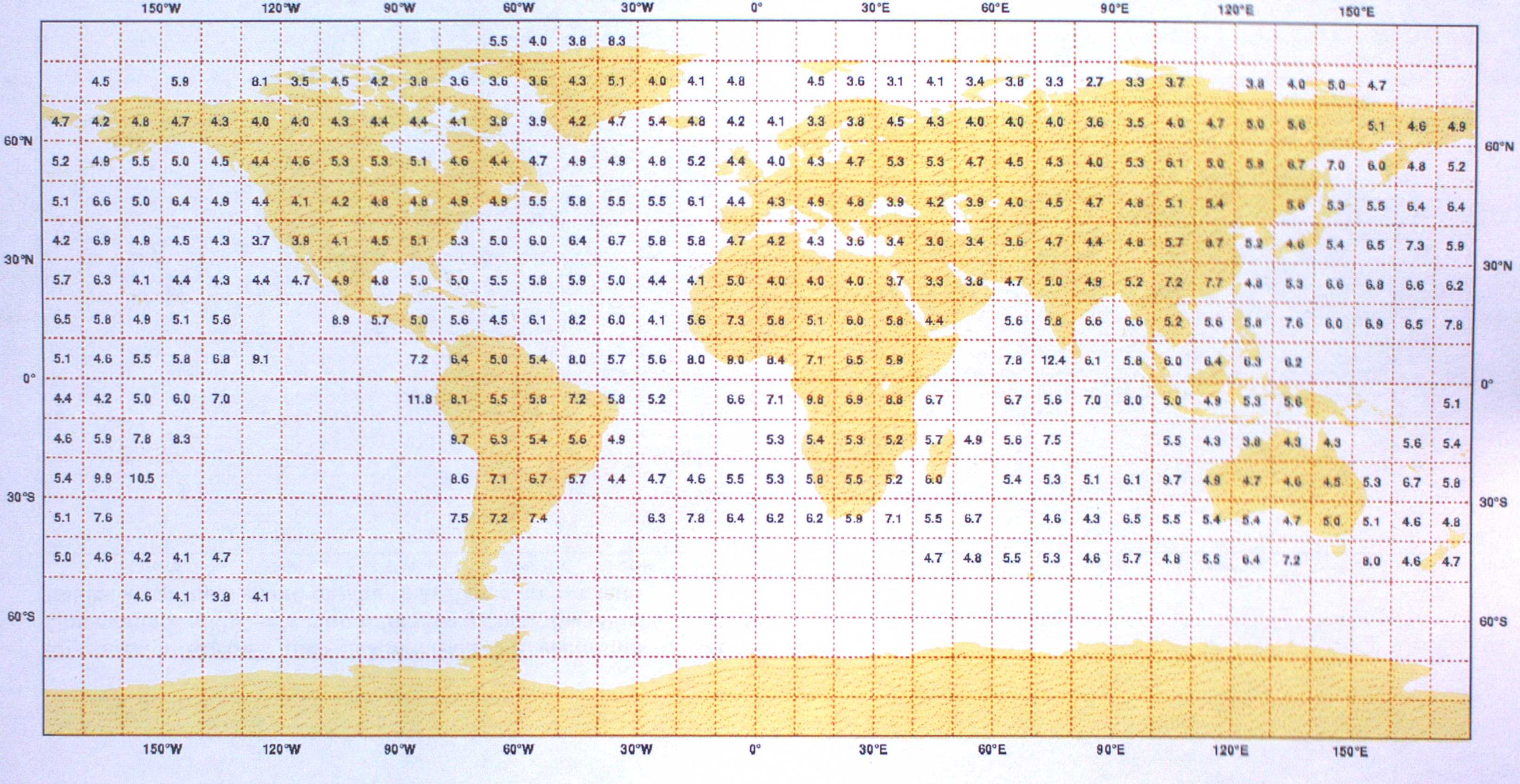

150°W 120°W 90°W 60°W 30°W 0° 30°E 60°E 90°E 120°E 150°E
60°N
30°N
0°
30°S
60°S
-0.5 1.2
-0.1 1.1 0.2 -2.3 -0.1 -0.1 1.2 -0.2 0.0 0.5 -0.2 0.2 -0.2
0.2 1.7 1.6 -0.5 0.3 0.3 0.2 0.4 -0.8 0.0 0.3 0.5 0.5 0.5 -0.6 -0.1 0.0 0.0 -0.1 0.6 0.4 -0.2 0.2 1.0 0.2
1.1 1.2 0.5 0.5 0.4 0.2 0.4 0.0 -0.2 0.3 0.9 0.1 0.3 0.4 0.2 0.2 0.2 0.4 0.5 1.0 -0.7 0.9 -0.7 0.6 0.5 -0.7 0.1 0.4 1.0 0.1 0.4
-0.2 0.1 0.3 0.6 0.8 0.4 0.4 0.3 0.0 0.6 0.3 0.3 0.0 0.1 0.4 0.1 0.9 1.2 1.9 0.4 0.7 0.4
0.2 0.1 0.6 0.6 0.0 0.5 0.6 0.3 0.5 0.5 0.1 -0.1 0.2 1.0 0.3 0.6 -0.1 0.4 0.9 0.0 3.9 0.1 0.2 0.8 -1.7
0.0 2.4 0.8 1.4 0.1 0.4 0.0 -0.3 0.2 1.6 2.2 -0.5 0.2 0.6 0.4 0.1 -0.3 0.5 0.5 1.1
0.5 3.0 0.5 0.5 0.4 0.3 1.0 0.4 0.5 0.5
2.1 0.4 0.8 1.9 0.2
-4.1 -3.9 1.0 1.3 -0.1 -0.3 0.4 1.1 0.9 0.0 0.9 -2.0
-3.0 0.2 0.1 0.0 0.4 -0.2 -0.5 0.7 -0.2 -0.4 0.4
-8.0 3.2 0.5 -0.4 0.5 0.5 -0.2 -0.7 1.1 0.3 0.2 -0.4 -0.4
0.6 0.3
150°W 120°W 90°W 60°W 30°W 0° 30°E 60°E 90°E 120°E 150°E
60°N
30°N
0°
30°S
60°S

Figure 7a. AIRCRAFT 300 - 150 hPa RMS O-B vector (ms-1). AUGUST 2006

Observations with O-B vector difference greater than 60 ms-1 excluded

Values are printed where greater than 30 obs are present



											5.5	4.0	3.8	8.3																					
	4.5		5.9		8.1	3.5	4.5	4.2	3.8	3.6	3.6	3.6	4.3	5.1	4.0	4.1	4.8		4.5	3.6	3.1	4.1	3.4	3.8	3.3	2.7	3.3	3.7		3.8	4.0	5.0	4.7		
4.7	4.2	4.8	4.7	4.3	4.0	4.0	4.3	4.4	4.4	4.1	3.8	3.9	4.2	4.7	5.4	4.8	4.2	4.1	3.3	3.8	4.5	4.3	4.0	4.0	4.0	3.6	3.5	4.0	4.7	5.0	5.6		5.1	4.6	4.9
5.2	4.9	5.5	5.0	4.5	4.4	4.6	5.3	5.3	5.1	4.6	4.4	4.7	4.9	4.9	4.8	5.2	4.4	4.0	4.3	4.7	5.3	5.3	4.7	4.5	4.3	4.0	5.3	6.1	5.0	5.8	6.7	7.0	6.0	4.8	5.2
5.1	6.6	5.0	6.4	4.9	4.4	4.1	4.2	4.8	4.8	4.9	4.9	5.5	5.8	5.5	5.5	6.1	4.4	4.3	4.9	4.8	3.9	4.2	3.9	4.0	4.5	4.7	4.8	5.1	5.4		5.6	5.3	5.5	6.4	6.4
4.2	6.9	4.9	4.5	4.3	3.7	3.9	4.1	4.5	5.1	5.3	5.0	6.0	6.4	6.7	5.8	5.8	4.7	4.2	4.3	3.6	3.4	3.0	3.4	3.6	4.7	4.4	4.8	5.7	8.7	5.2	4.6	5.4	6.5	7.3	5.9
5.7	6.3	4.1	4.4	4.3	4.4	4.7	4.9	4.8	5.0	5.0	5.5	5.8	5.9	5.0	4.4	4.1	5.0	4.0	4.0	4.0	3.7	3.3	3.8	4.7	5.0	4.9	5.2	7.2	7.7	4.8	5.3	6.6	6.8	6.6	6.2
6.5	5.8	4.9	5.1	5.6			8.9	5.7	5.0	5.6	4.5	6.1	8.2	6.0	4.1	5.6	7.3	5.8	5.1	6.0	5.8	4.4		5.6	5.8	6.6	6.6	5.2	5.6	5.8	7.6	6.0	6.9	6.5	7.8
5.1	4.6	5.5	5.8	6.8	9.1				7.2	6.4	5.0	5.4	8.0	5.7	5.6	8.0	9.0	8.4	7.1	6.5	5.9			7.8	12.4	6.1	5.8	6.0	6.4	6.3	6.2				
4.4	4.2	5.0	6.0	7.0					11.8	8.1	5.5	5.8	7.2	5.8	5.2		6.6	7.1	9.8	6.9	8.8	6.7		6.7	5.6	7.0	8.0	5.0	4.9	5.3	5.6				5.1
4.6	5.9	7.8	8.3							9.7	6.3	5.4	5.6	4.9				5.3	5.4	5.3	5.2	5.7	4.9	5.6	7.5			5.5	4.3	3.8	4.3	4.3		5.6	5.4
5.4	9.9	10.5								8.6	7.1	6.7	5.7	4.4	4.7	4.6	5.5	5.3	5.8	5.5	5.2	6.0		5.4	5.3	5.1	6.1	9.7	4.9	4.7	4.6	4.5	5.3	6.7	5.8
5.1	7.6									7.5	7.2	7.4			6.3	7.8	6.4	6.2	6.2	5.9	7.1	5.5	6.7		4.6	4.3	6.5	5.5	5.4	5.4	4.7	5.0	5.1	4.6	4.8
5.0	4.6	4.2	4.1	4.7																		4.7	4.8	5.5	5.3	4.6	5.7	4.8	5.5	6.4	7.2		8.0	4.6	4.7
		4.6	4.1	3.8	4.1																														

Figure 7b. AIRCRAFT 1000 - 301 hPa RMS O-B vector (ms-1). AUGUST 2006
Observations with O-B vector difference greater than 60 ms-1 excluded
Values are printed where greater than 30 obs are present

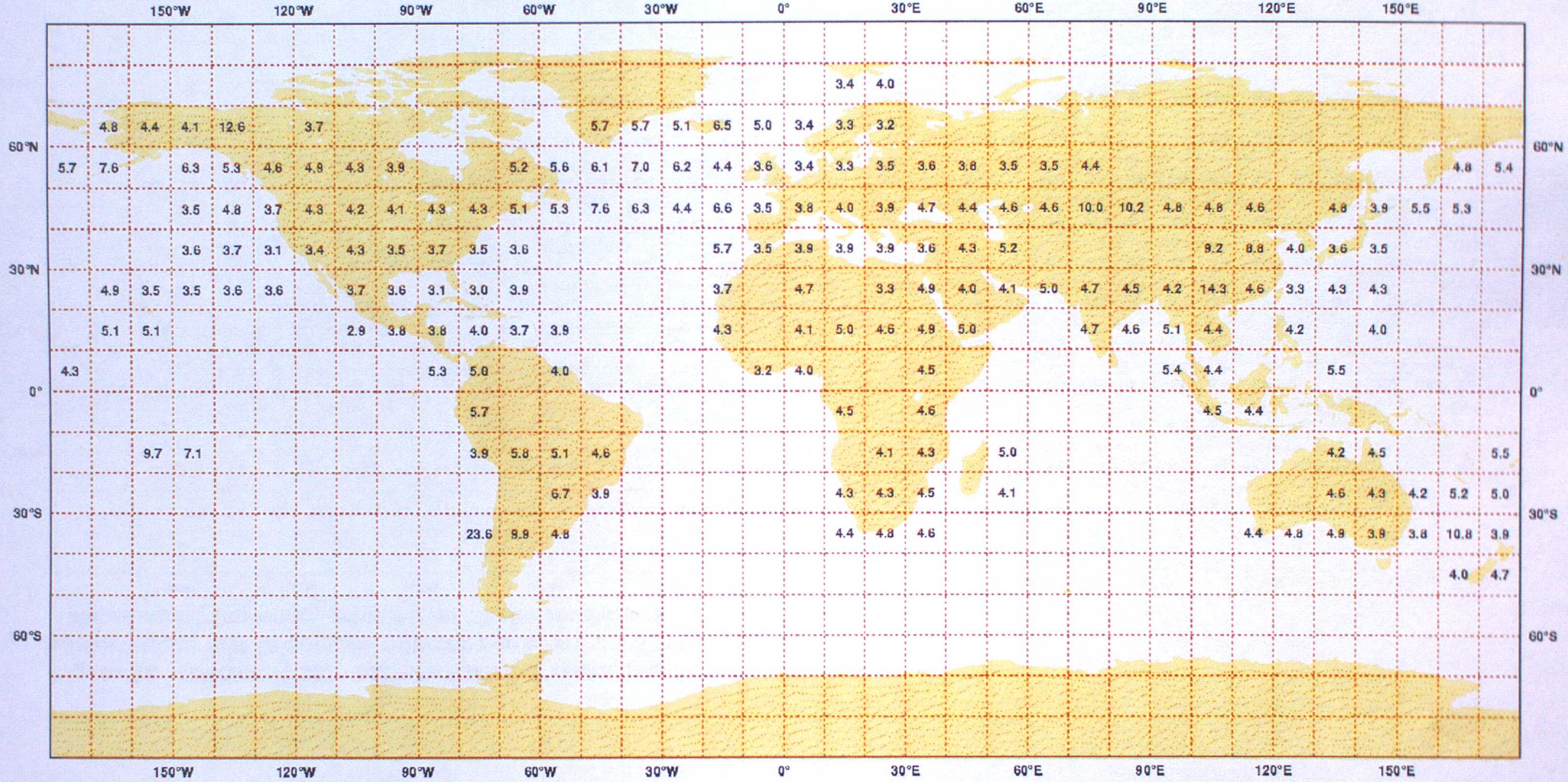

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
3.4 4.0
4.8 4.4 4.1 12.6 3.7 5.7 5.7 5.1 6.5 5.0 3.4 3.3 3.2
5.7 7.6 6.3 5.3 4.6 4.9 4.3 3.9 5.2 5.6 6.1 7.0 6.2 4.4 3.6 3.4 3.3 3.5 3.6 3.8 3.5 3.5 4.4 4.8 5.4
3.5 4.8 3.7 4.3 4.2 4.1 4.3 4.3 5.1 5.3 7.6 6.3 4.4 6.6 3.5 3.8 4.0 3.9 4.7 4.4 4.6 4.6 10.0 10.2 4.8 4.8 4.6 4.8 3.9 5.5 5.3
3.6 3.7 3.1 3.4 4.3 3.5 3.7 3.5 3.6 5.7 3.5 3.9 3.9 3.9 3.6 4.3 5.2 9.2 8.8 4.0 3.6 3.5
4.9 3.5 3.5 3.6 3.6 3.7 3.6 3.1 3.0 3.9 3.7 4.7 3.3 4.9 4.0 4.1 5.0 4.7 4.5 4.2 14.3 4.6 3.3 4.3 4.3
5.1 5.1 2.9 3.8 3.8 4.0 3.7 3.9 4.3 4.1 5.0 4.6 4.9 5.0 4.7 4.6 5.1 4.4 4.2 4.0
4.3 5.3 5.0 4.0 3.2 4.0 4.5 5.4 4.4 5.5
5.7 4.5 4.6 4.5 4.4
9.7 7.1 3.9 5.8 5.1 4.6 4.1 4.3 5.0 4.2 4.5 5.5
6.7 3.9 4.3 4.3 4.5 4.1 4.6 4.3 4.2 5.2 5.0
23.6 8.9 4.8 4.4 4.8 4.6 4.4 4.8 4.9 3.9 3.8 10.8 3.9
4.0 4.7

TABLE 5

MONTHLY MONITORING OF RADIOSONDE OBSERVATIONS
MONITORING CENTRE: EXETER
MONTH: Aug 2006

Monitoring procedures

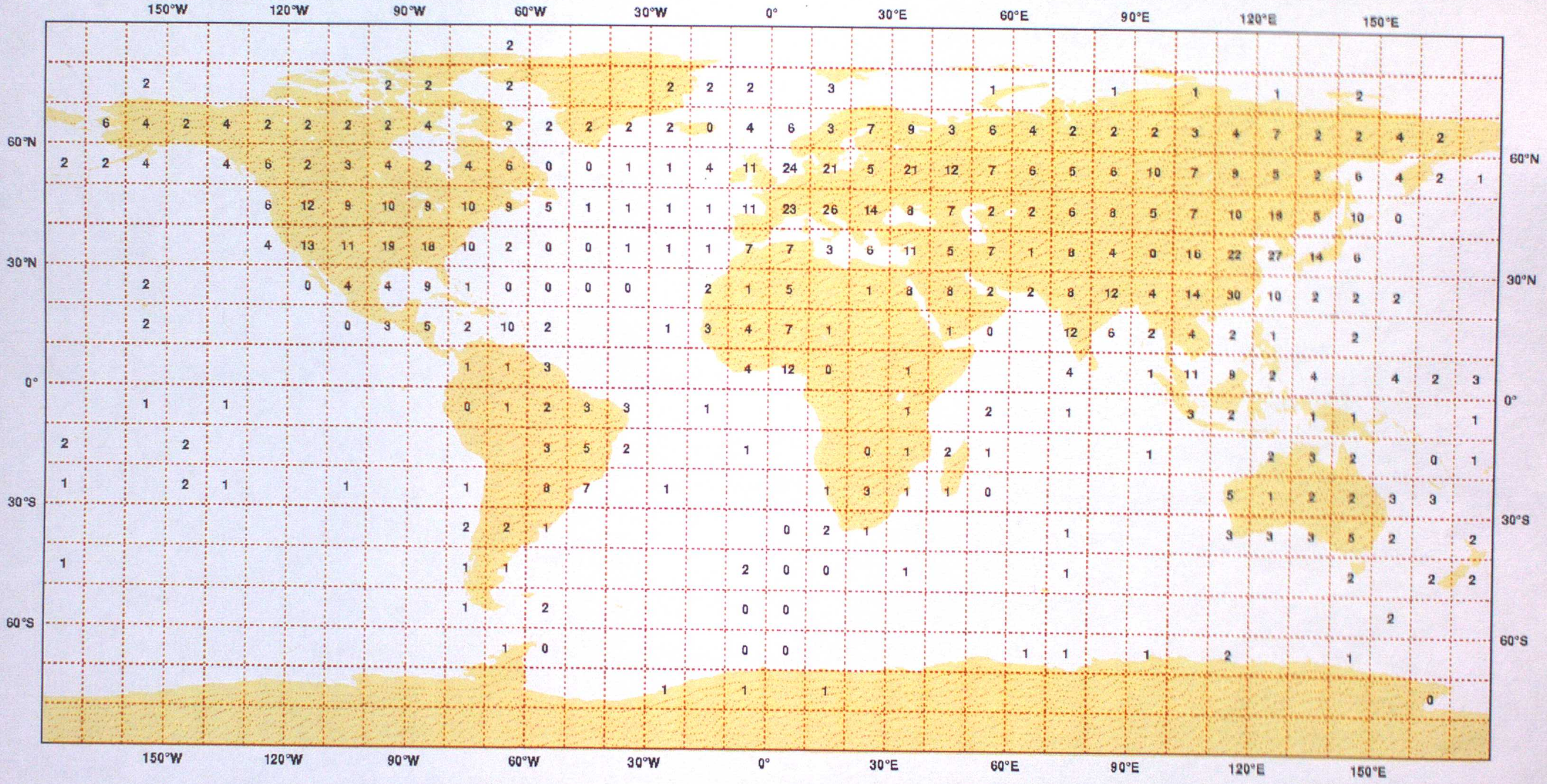
Period		:One calendar month.
Data monitored		:Reports from each unique identifier for radiosonde TEMPs.
Area monitored		:90°N - 90°S, 180°W - 180°E.
Standard of comparison		:Background field from UKMO global model.
Observation times		:00 UTC and 12 UTC.
Level(s) monitored		:Standard levels between 1000.0 - 30.0 hPa
Element monitored		:GEOPOTENTIAL HEIGHT IN metres
Parameters monitored	:NUM OBS	:Number of observations available at level shown during period.
	:NUM GROSS	:Number of gross errors at level shown during period.
	:% REJ	:Percentage of observations rejected by quality control at level shown during period excluding those with gross errors.
	:SD	:SD of difference of observations from background values at level shown excluding those with gross errors.
	:BIAS	:Mean difference of observations from background values at level shown excluding those with gross errors.
	:RMS	:Root Mean Square difference of observations from background values at level shown excluding those with gross errors.
	:NUM LEVELS	:Number of levels satisfying selection criteria.
GROSS ERROR LIMITS	:Defined in Appendix I.1	
SELECTION CRITERIA	: ≥3 levels with ≥10 observations and ≥ 100 m weighted RMS.	

ONLY THE WORST LEVEL IS SHOWN WITH UNWEIGHTED RMS

WMO IDENT	OBS TIME	ELM	LEV	LAT/LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS	NUM LEVELS
28698	12	Z	1000	55/ 73	27	2	24.9	-21.4	32.9	4
28952	00	Z	1000	53/ 64	29	0	24.9	-45.4	51.8	7
34731	00	Z	50	47/ 40	17	0	118.1	107.7	159.8	4
34731	12	Z	150	47/ 40	21	2	92.2	75.0	118.8	5
41594	00	Z	100	32/ 73	18	2	111.4	59.4	126.3	5
42027	00	Z	150	34/ 75	12	0	120.7	-158.2	199.0	5
42101	00	Z	150	30/ 76	17	1	89.7	-141.2	167.3	7
42101	12	Z	50	30/ 76	10	1	126.3	156.3	201.0	6
42182	00	Z	200	29/ 77	24	4	88.9	-113.6	144.2	10
42182	12	Z	50	29/ 77	15	1	188.0	51.7	195.0	10
42314	00	Z	150	27/ 95	14	1	54.2	-168.6	177.1	7
42339	00	Z	150	26/ 73	15	1	102.6	-173.7	201.7	8
42339	12	Z	150	26/ 73	12	0	99.0	-42.4	107.7	4
42361	00	Z	200	26/ 78	9	2	72.4	-128.4	147.5	5
42369	00	Z	200	27/ 81	22	1	47.7	-137.0	145.1	10
42369	12	Z	50	27/ 81	14	1	112.1	132.4	173.5	8
42397	00	Z	200	27/ 88	18	2	96.5	-104.1	141.9	7
42397	12	Z	200	27/ 88	14	0	92.2	-86.3	126.3	7
42410	00	Z	200	26/ 92	28	0	76.5	-125.1	146.7	10
42410	12	Z	200	26/ 92	22	0	60.7	-141.5	153.9	8
42647	00	Z	150	23/ 73	13	0	51.1	-159.2	167.2	5
42667	12	Z	200	23/ 77	9	1	96.5	-88.7	131.1	5
42701	00	Z	200	23/ 85	17	1	83.4	-75.4	112.4	8
42701	12	Z	150	23/ 85	13	0	88.1	-115.1	144.9	4
42724	00	Z	200	24/ 91	14	1	37.8	-101.9	108.7	7
42724	12	Z	500	24/ 91	12	0	35.3	-63.8	72.9	4
42809	00	Z	200	23/ 88	20	0	41.9	-137.4	143.7	10
42809	12	Z	200	23/ 88	26	1	74.7	-113.5	135.8	9
42867	00	Z	150	21/ 79	19	0	133.0	-119.1	178.5	8
42867	12	Z	150	21/ 79	16	1	56.1	-158.4	168.1	9
42874	12	Z	200	21/ 82	20	0	59.9	-109.1	124.5	4
42971	00	Z	1000	20/ 86	20	2	27.1	-48.3	55.4	7
42971	12	Z	1000	20/ 86	16	3	19.5	-47.3	51.1	9
43003	00	Z	1000	19/ 73	29	1	21.2	-64.8	68.2	8
43003	12	Z	1000	19/ 73	29	1	20.2	-63.7	66.8	9
43128	00	Z	100	17/ 78	20	1	79.5	-143.2	163.8	6
43150	00	Z	1000	18/ 83	26	3	23.4	-53.5	58.4	8
43150	12	Z	1000	18/ 83	14	7	21.1	-63.4	66.8	4
43192	00	Z	1000	15/ 74	21	0	13.4	-59.6	61.1	4
43279	00	Z	150	13/ 80	20	0	66.7	-98.2	118.7	6
43279	12	Z	150	13/ 80	22	0	86.4	-69.7	111.0	5
43311	00	Z	200	11/ 73	12	3	49.1	-145.8	153.9	6
43311	12	Z	200	11/ 73	12	1	42.6	-137.0	143.5	6
43333	00	Z	250	12/ 93	10	0	68.0	-85.0	108.8	4
43346	12	Z	150	11/ 80	16	1	116.8	-53.3	128.4	6
43353	00	Z	1000	10/ 76	21	5	8.1	-87.7	88.0	5
43353	12	Z	1000	10/ 76	18	10	6.6	-91.8	92.1	5
43369	00	Z	500	8/ 73	28	0	38.2	-44.0	58.3	6
43371	00	Z	150	8/ 77	21	4	81.7	-142.3	164.1	5
82099	12	Z	250	0/ -51	2	8	8.0	215.0	215.1	5
83554	12	Z	1000	-19/ -58	9	2	23.7	-44.1	50.1	4
96163	00	Z	200	-1/ 100	18	5	86.5	-43.5	96.8	4
96163	12	Z	1000	-1/ 100	3	17	56.8	-27.7	63.1	13
96935	00	Z	850	-7/ 113	16	2	37.5	3.3	37.6	6
96935	12	Z	200	-7/ 113	16	2	112.8	-37.9	119.0	13
97014	00	Z	250	2/ 125	26	3	79.5	-19.8	81.9	12
97014	12	Z	70	2/ 125	24	2	131.5	34.2	135.8	6

97180	00	Z	300	-5/ 120	14	3	86.9	-95.4	129.0	12

Figure 8. TEMP 500 hPa geopotential mean daily count. AUGUST 2006
All hours
Global average number of observations in 24 hours = 1221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120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S

TABLE 6

MONTHLY MONITORING OF RADIOSONDE OBSERVATIONS
MONITORING CENTRE: EXETER
MONTH: Aug 2006

Monitoring procedures

Period :One calendar month.

Data monitored :Reports from each unique identifier for radiosonde TEMPs.

Area monitored :90°N - 90°S, 180°W - 180°E.

Standard of comparison :Background field from UKMO global model.

Observation times :00 UTC and 12 UTC.

Level(s) monitored :Standard levels between 1000.0 - 100.0 hPa

Element monitored :VECTOR WIND in m s^{-1}

Parameters monitored

:NUM OBS :Number of observations available at level shown during period.

:NUM GROSS :Number of gross errors at level shown during period.

:% REJ :Percentage of observations rejected by quality control at level shown during period excluding those with gross errors.

:UBIAS,VBIAS :Mean difference of observations of U and V components from background values at level shown excluding those with gross errors.

:RMS :Root Mean Square difference of observations from background values at level shown excluding those with gross errors.

:NUM LEVELS :Number of levels satisfying selection criteria.

GROSS ERROR LIMITS :Defined in Appendix I.2

SELECTION CRITERIA : $\geq$ 10 observations and $\geq$ 15 m s^{-1} RMS vector wind.

ONLY THE STANDARD LEVEL BETWEEN 1000 - 100 hPa WITH HIGHEST RMS IS SHOWN

WMO IDENT	OBS TIME	ELM	LEV	LAT/LONG	NUM OBS	NUM GROSS	% REJ	UBIAS	VBIAS	RMS	LEVELS
OXGN2	00	V	300	60/ -38	10	0	20	6.8	-3.8	20.5	1
07761	12	V	150	42/ 9	10	0	40	5.2	1.9	26.2	3
41594	00	V	100	32/ 73	20	0	100	10.9	3.7	16.4	1
43346	12	V	200	11/ 80	17	0	100	-2.6	0.6	20.3	1
43369	00	V	250	8/ 73	11	1	100	1.5	1.8	15.7	1
43599	12	V	100	-1/ 73	26	0	100	17.3	2.3	20.5	1
48407	12	V	100	15/ 105	22	0	100	9.0	6.1	15.1	1
48565	00	V	150	8/ 98	17	0	23	6.5	1.1	17.2	1
61641	12	V	300	15/ -17	28	0	7	-0.7	-0.5	15.2	1
63894	12	V	100	-7/ 39	10	0	20	12.4	-4.5	22.8	1
64458	12	V	150	2/ 16	17	0	100	12.6	2.3	17.5	1
71603	00	V	250	44/ -66	30	0	23	-8.1	2.8	19.7	3
72797	00	V	250	48/-125	29	0	6	5.9	-1.7	15.4	1
89009	00	V	200	-90/ 0	26	0	100	-0.1	-13.5	21.5	5
97180	00	V	250	-5/ 120	17	0	41	5.3	3.9	18.9	5

Figure 9. TEMP/PILOT 300 hPa wind mean daily count. AUGUST 2006
All hours
Global average number of observations in 24 hours = 1417

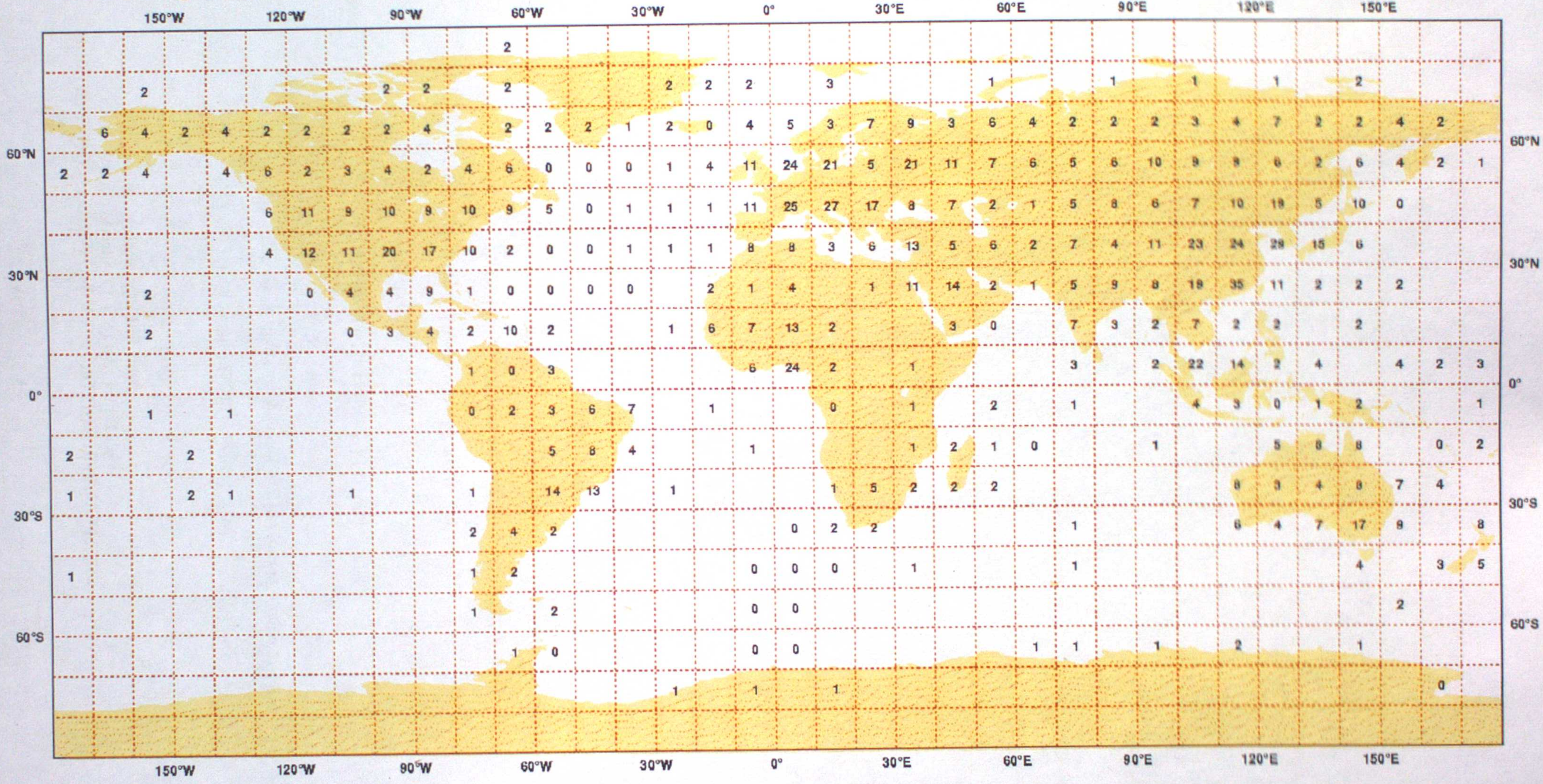

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
2
2 2 2 2 2 2 2 3 1 1 1 1 2
6 4 2 4 2 2 2 2 4 2 2 2 1 2 0 4 5 3 7 9 3 6 4 2 2 2 3 4 7 2 2 4 2
2 2 4 4 6 2 3 4 2 4 6 0 0 0 1 4 11 24 21 5 21 11 7 6 5 6 10 9 9 6 2 6 4 2 1
6 11 9 10 9 10 9 5 0 1 1 1 11 25 27 17 8 7 2 1 5 8 6 7 10 19 5 10 0
4 12 11 20 17 10 2 0 0 1 1 1 8 8 3 6 13 5 6 2 7 4 11 23 24 28 15 6
2 0 4 4 9 1 0 0 0 0 2 1 4 1 11 14 2 1 5 9 8 19 35 11 2 2 2
2 0 3 4 2 10 2 1 6 7 13 2 3 0 7 3 2 7 2 2 2
1 0 3 6 24 2 1 3 2 22 14 2 4 4 2 3
1 1 0 2 3 6 7 1 0 1 2 1 4 3 0 1 2 1
2 2 5 8 4 1 1 2 1 0 1 5 8 8 0 2
1 2 1 1 1 14 13 1 1 5 2 2 2 8 3 4 8 7 4
2 4 2 0 2 2 1 6 4 7 17 9 8
1 1 2 0 0 0 1 1 4 3 5
1 2 0 0 2
1 0 0 0 1 1 1 2 1
1 1 1 0

TABLE 7

MONTHLY MONITORING OF RADIOSONDE OBSERVATIONS
MONITORING CENTRE: EXETER
MONTH: Aug 2006

Monitoring procedures

Period		:One calendar month.
Data monitored		:Reports from each unique identifier for radiosonde TEMPs.
Area monitored		:90°N - 90°S, 180°W - 180°E.
Standard of comparison		:Background field from UKMO global model.
Observation times		:00 UTC and 12 UTC.
Level(s) monitored		:Standard levels between 500.0 - 150.0 hPa
Element monitored		:WIND DIRECTION in degrees
Parameters monitored		
	:NUM OBS	:Average number of observations at all levels.
	:BIAS	:Mean difference of observations from background values from all levels.
	:MAX SPREAD	:(For observation - background values) Maximum absolute difference of SD at any level from SD at all levels
	:SD	:SD of difference of observations from background values at all levels.
SELECTION CRITERIA	:NUM OBS ≥ 5, and ABSOLUTE BIAS ≥ 10°, with SD < 30°, and MAX SPREAD < 10°	

WMO IDENT	OBS TIME	ELM	LAT/LONG	NUM OBS	BIAS	MAX SPREAD	SD
22550	12	DD	65/ 41	24	12.1	6.8	14.2
31873	00	DD	46/ 134	29	20.4	8.1	15.2
31873	12	DD	46/ 134	28	18.5	5.0	11.2
33791	12	DD	48/ 33	25	-14.9	2.7	9.9
34731	00	DD	47/ 40	26	14.0	4.4	13.8
34731	12	DD	47/ 40	25	13.4	6.7	12.7
42101	12	DD	30/ 76	5	12.5	6.9	15.8
42182	12	DD	29/ 77	16	-11.9	8.2	25.5
43150	00	DD	18/ 83	19	-16.9	6.2	22.5
43150	12	DD	18/ 83	12	-14.1	9.1	24.1
43333	00	DD	12/ 93	8	12.3	9.5	18.6
59981	12	DD	17/ 112	19	12.3	2.2	20.1
63450	12	DD	9/ 39	13	11.5	6.5	18.8
70326	00	DD	59/-157	27	-10.4	4.2	8.5
70326	12	DD	59/-157	28	-10.3	5.3	9.5
91334	12	DD	7/ 152	19	-10.7	6.6	27.7

MONITORING OF SATELLITE WINDS

MONITORING CENTRE: EXETER

MONTH: Aug 2006

Monitoring procedures

Period :One calendar month.

Data monitored :Reports from GOES-9, GOES-10, GOES-12, METEOSAT-5, METEOSAT-7

Standard of comparison :Background field from UKMO global model.

Selection Criteria :number of observations > 10.

Data Extracted :Layer 701 - 1000 hPa
401 - 700 hPa
101 - 400 hPa

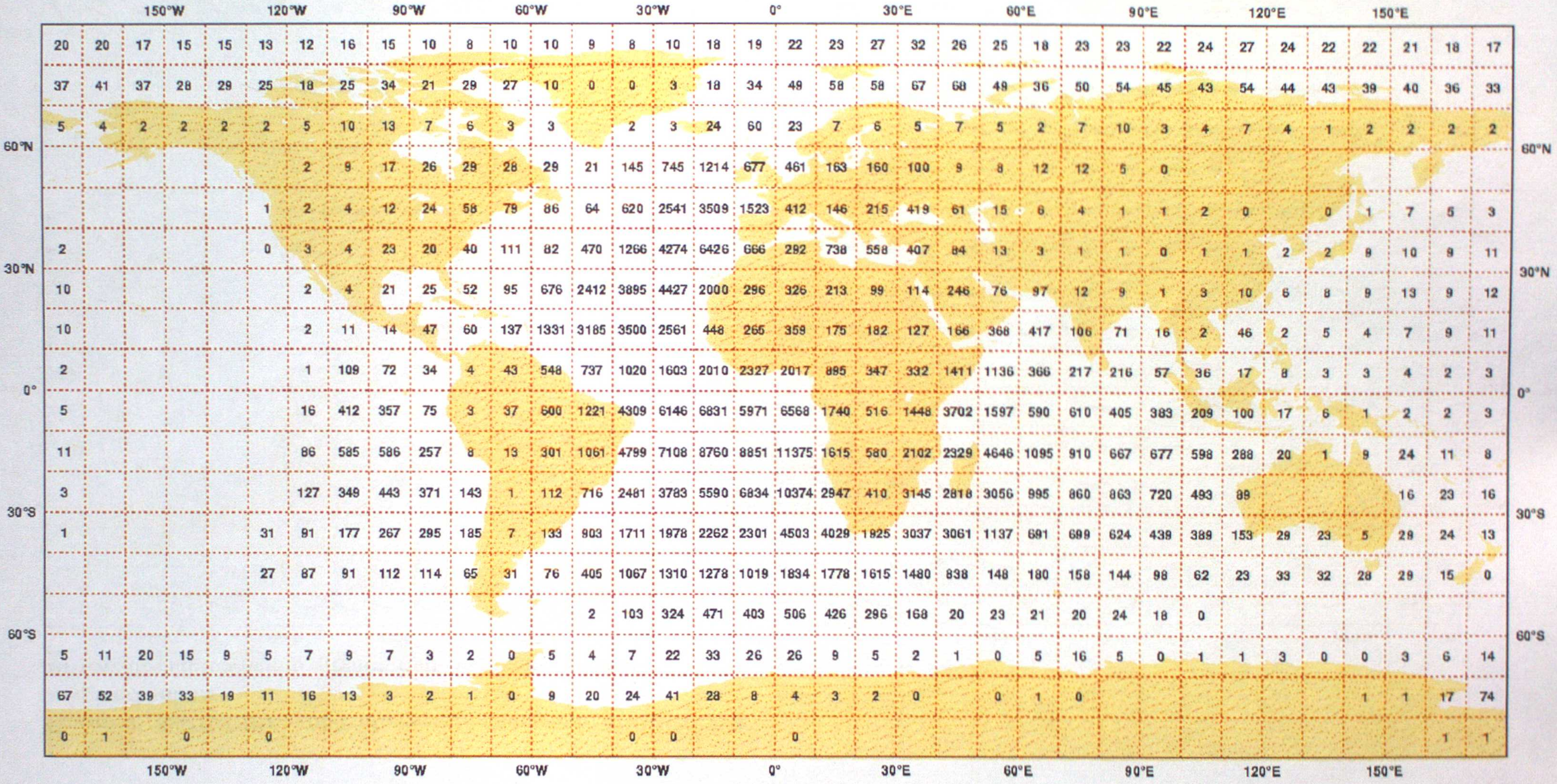
:Mean wind

:Mean observation minus background vector wind differences

:Mean observation minus background speed differences

:RMS of observation minus background vector differences

Figure 10. SATOB 701 - 1000 hPa mean daily count. AUGUST 2006
Global average number of observations in 24 hours = 275793



20	20	17	15	15	13	12	16	15	10	8	10	10	9	8	10	18	19	22	23	27	32	26	25	18	23	23	22	24	27	24	22	22	21	18	17
37	41	37	28	29	25	18	25	34	21	29	27	10	0	0	3	18	34	49	58	58	67	68	49	36	50	54	45	43	54	44	43	39	40	36	33
5	4	2	2	2	2	5	10	13	7	6	3	3		2	3	24	60	23	7	6	5	7	5	2	7	10	3	4	7	4	1	2	2	2	2
						2	9	17	26	29	28	29	21	145	745	1214	677	461	163	160	100	9	8	12	12	5	0								
					1	2	4	12	24	58	79	86	64	620	2541	3509	1523	412	146	215	419	61	15	6	4	1	1	2	0		0	1	7	5	3
2					0	3	4	23	20	40	111	82	470	1266	4274	6426	666	282	738	558	407	84	13	3	1	1	0	1	1	2	2	8	10	8	11
10						2	4	21	25	52	95	676	2412	3895	4427	2000	296	326	213	99	114	246	76	97	12	9	1	3	10	6	8	9	13	9	12
10						2	11	14	47	60	137	1331	3185	3500	2561	448	265	359	175	182	127	166	368	417	106	71	16	2	46	2	5	4	7	9	11
2						1	109	72	34	4	43	548	737	1020	1603	2010	2327	2017	885	347	332	1411	1136	366	217	216	57	36	17	8	3	3	4	2	3
5						16	412	357	75	3	37	600	1221	4309	6146	6831	5971	6568	1740	516	1448	3702	1597	590	610	405	383	209	100	17	6	1	2	2	3
11						86	585	586	257	8	13	301	1061	4799	7108	8760	8851	11375	1615	580	2102	2329	4646	1095	910	667	677	598	288	20	1	9	24	11	8
3						127	349	443	371	143	1	112	716	2481	3783	5590	6834	10374	2947	410	3145	2818	3056	995	860	863	720	493	89				16	23	16
1					31	91	177	267	295	185	7	133	903	1711	1978	2262	2301	4503	4029	1825	3037	3061	1137	691	699	624	439	389	153	29	23	5	29	24	13
					27	87	91	112	114	65	31	76	405	1067	1310	1278	1019	1834	1778	1615	1480	838	148	180	158	144	98	62	23	33	32	28	29	15	0
													2	103	324	471	403	506	426	296	168	20	23	21	20	24	18	0							
5	11	20	15	9	5	7	9	7	3	2	0	5	4	7	22	33	26	26	9	5	2	1	0	5	16	5	0	1	1	3	0	0	3	6	14
67	52	39	33	19	11	16	13	3	2	1	0	9	20	24	41	28	8	4	3	2	0		0	1	0							1	1	17	74
0	1		0		0									0	0			0																1	1

Figure 11. SATOB 701 - 1000 hPa vector mean wind. AUGUST 2006
All observations
Arrows are plotted where greater than 10 obs are present

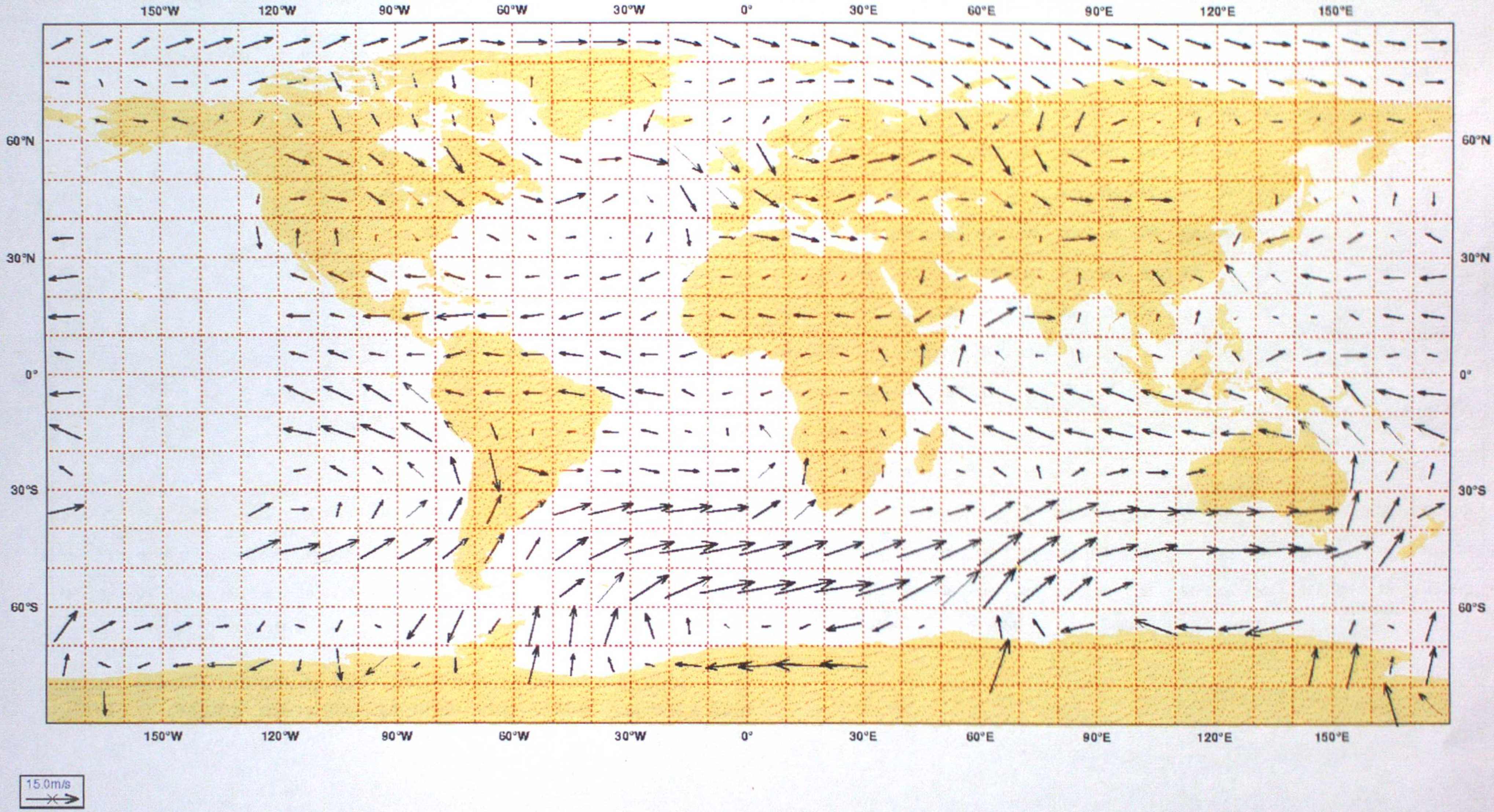

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
15.0m/s

Figure 12. SATOB 701 - 1000 hPa mean vector wind differences. AUGUST 2006
All observations
Arrows are plotted where greater than 10 obs are present

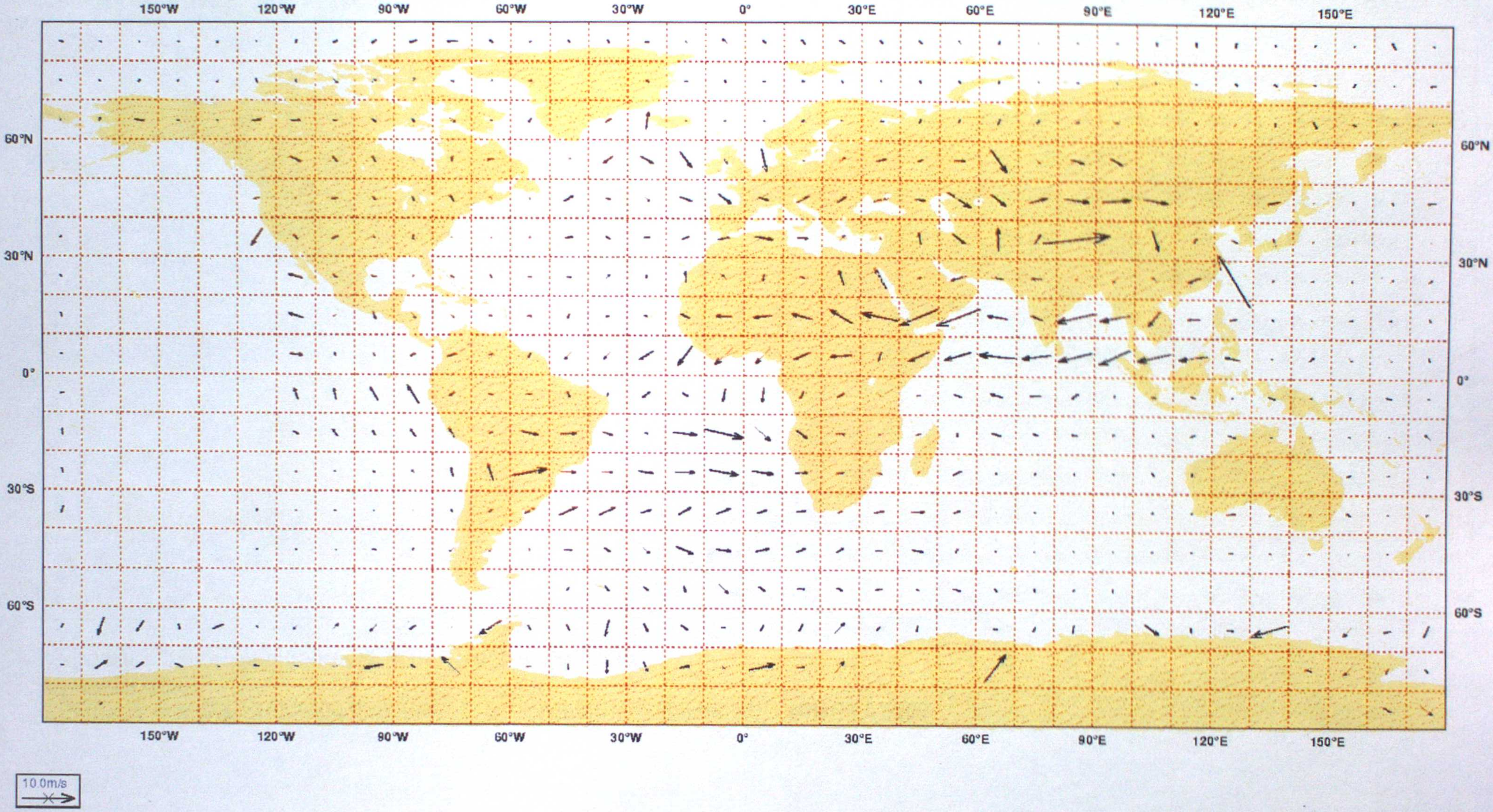
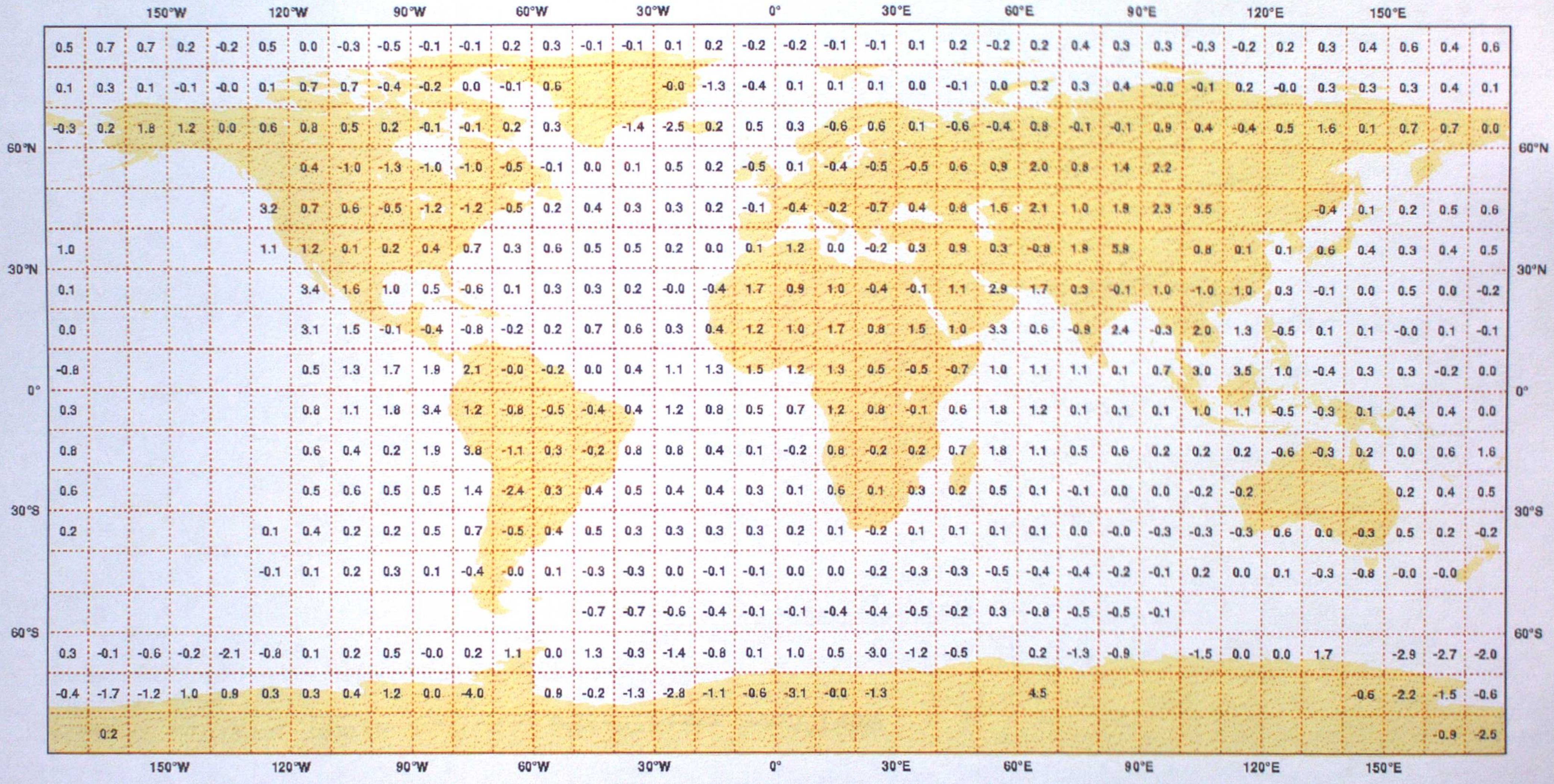
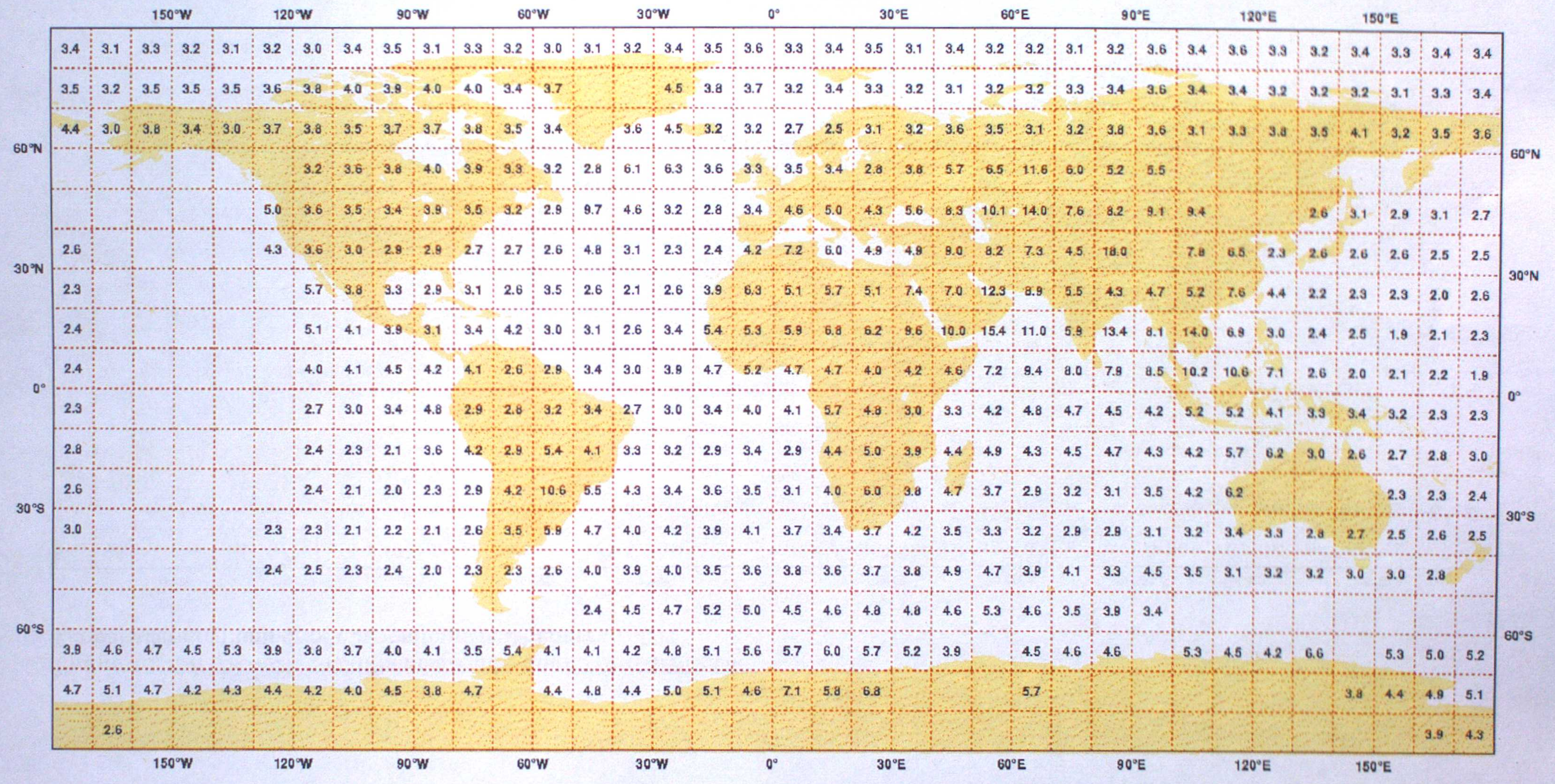

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
10.0m/s

Figure 13. SATOB 701 - 1000 hPa mean O-B speed differences (ms-1). AUGUST 2006
All observations
Values are plotted where greater than 10 obs are present



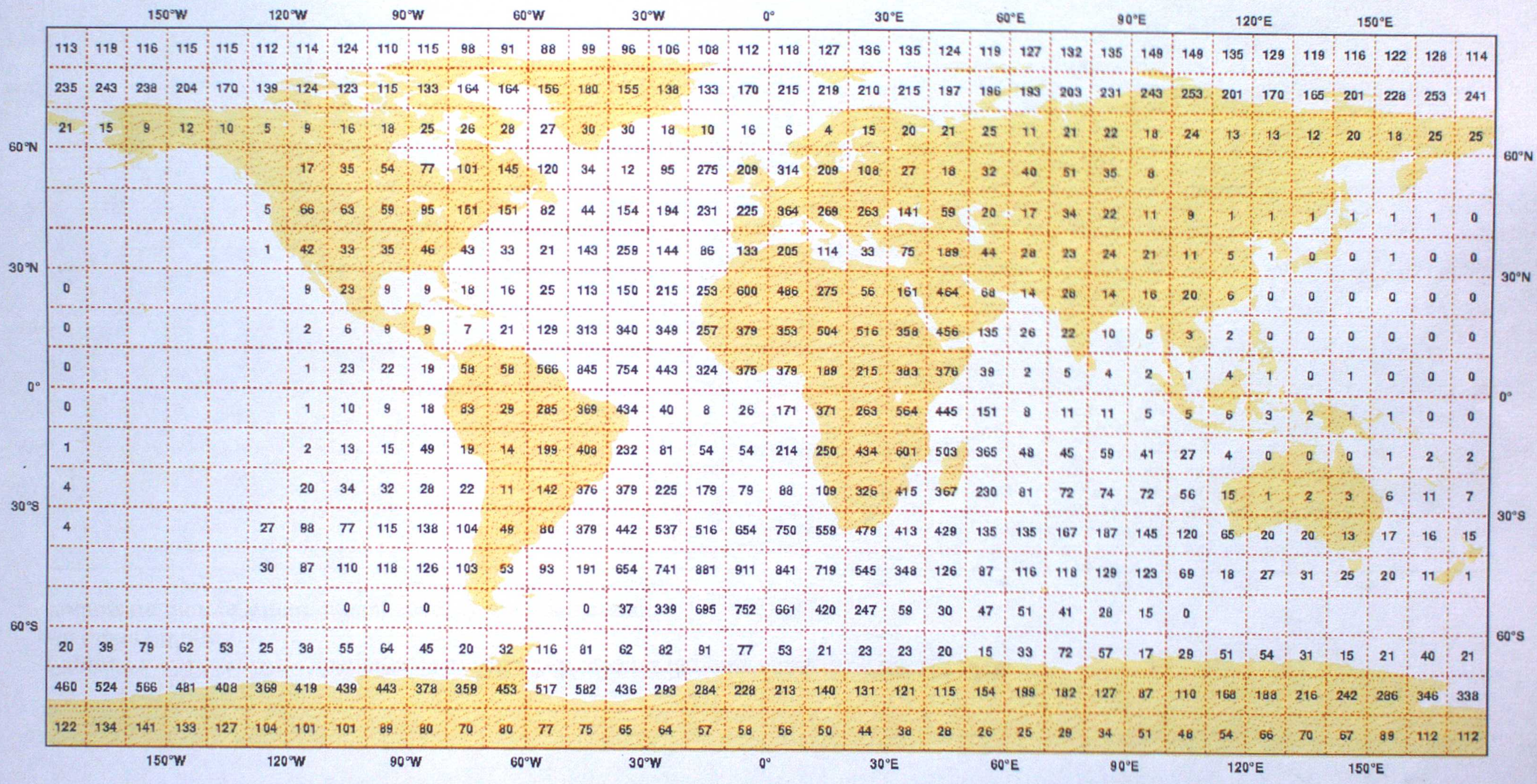
0.5	0.7	0.7	0.2	-0.2	0.5	0.0	-0.3	-0.5	-0.1	-0.1	0.2	0.3	-0.1	-0.1	0.1	0.2	-0.2	-0.2	-0.1	-0.1	0.1	0.2	-0.2	0.2	0.4	0.3	0.3	-0.3	-0.2	0.2	0.3	0.4	0.6	0.4	0.6
0.1	0.3	0.1	-0.1	-0.0	0.1	0.7	0.7	-0.4	-0.2	0.0	-0.1	0.6			-0.0	-1.3	-0.4	0.1	0.1	0.1	0.0	-0.1	0.0	0.2	0.3	0.4	-0.0	-0.1	0.2	-0.0	0.3	0.3	0.3	0.4	0.1
-0.3	0.2	1.8	1.2	0.0	0.6	0.8	0.5	0.2	-0.1	-0.1	0.2	0.3		-1.4	-2.5	0.2	0.5	0.3	-0.6	0.6	0.1	-0.6	-0.4	0.8	-0.1	-0.1	0.9	0.4	-0.4	0.5	1.6	0.1	0.7	0.7	0.0
						0.4	-1.0	-1.3	-1.0	-1.0	-0.5	-0.1	0.0	0.1	0.5	0.2	-0.5	0.1	-0.4	-0.5	-0.5	0.6	0.9	2.0	0.8	1.4	2.2								
					3.2	0.7	0.6	-0.5	-1.2	-1.2	-0.5	0.2	0.4	0.3	0.3	0.2	-0.1	-0.4	-0.2	-0.7	0.4	0.8	1.6	2.1	1.0	1.8	2.3	3.5			-0.4	0.1	0.2	0.5	0.6
1.0					1.1	1.2	0.1	0.2	0.4	0.7	0.3	0.6	0.5	0.5	0.2	0.0	0.1	1.2	0.0	-0.2	0.3	0.9	0.3	-0.8	1.8	5.8		0.8	0.1	0.1	0.6	0.4	0.3	0.4	0.5
0.1						3.4	1.6	1.0	0.5	-0.6	0.1	0.3	0.3	0.2	-0.0	-0.4	1.7	0.9	1.0	-0.4	-0.1	1.1	2.9	1.7	0.3	-0.1	1.0	-1.0	1.0	0.3	-0.1	0.0	0.5	0.0	-0.2
0.0						3.1	1.5	-0.1	-0.4	-0.8	-0.2	0.2	0.7	0.6	0.3	0.4	1.2	1.0	1.7	0.8	1.5	1.0	3.3	0.6	-0.9	2.4	-0.3	2.0	1.3	-0.5	0.1	0.1	-0.0	0.1	-0.1
-0.8						0.5	1.3	1.7	1.9	2.1	-0.0	-0.2	0.0	0.4	1.1	1.3	1.5	1.2	1.3	0.5	-0.5	-0.7	1.0	1.1	1.1	0.1	0.7	3.0	3.5	1.0	-0.4	0.3	0.3	-0.2	0.0
0.3						0.8	1.1	1.8	3.4	1.2	-0.8	-0.5	-0.4	0.4	1.2	0.8	0.5	0.7	1.2	0.8	-0.1	0.6	1.8	1.2	0.1	0.1	0.1	1.0	1.1	-0.5	-0.3	0.1	0.4	0.4	0.0
0.8						0.6	0.4	0.2	1.9	3.8	-1.1	0.3	-0.2	0.8	0.8	0.4	0.1	-0.2	0.8	-0.2	0.2	0.7	1.8	1.1	0.5	0.6	0.2	0.2	0.2	-0.6	-0.3	0.2	0.0	0.6	1.6
0.6						0.5	0.6	0.5	0.5	1.4	-2.4	0.3	0.4	0.5	0.4	0.4	0.3	0.1	0.6	0.1	0.3	0.2	0.5	0.1	-0.1	0.0	0.0	-0.2	-0.2				0.2	0.4	0.5
0.2					0.1	0.4	0.2	0.2	0.5	0.7	-0.5	0.4	0.5	0.3	0.3	0.3	0.3	0.2	0.1	-0.2	0.1	0.1	0.1	0.1	0.0	-0.0	-0.3	-0.3	-0.3	0.6	0.0	-0.3	0.5	0.2	-0.2
					-0.1	0.1	0.2	0.3	0.1	-0.4	-0.0	0.1	-0.3	-0.3	0.0	-0.1	-0.1	0.0	0.0	-0.2	-0.3	-0.3	-0.5	-0.4	-0.4	-0.2	-0.1	0.2	0.0	0.1	-0.3	-0.8	-0.0	-0.0	
													-0.7	-0.7	-0.6	-0.4	-0.1	-0.1	-0.4	-0.4	-0.5	-0.2	0.3	-0.8	-0.5	-0.5	-0.1								
0.3	-0.1	-0.6	-0.2	-2.1	-0.8	0.1	0.2	0.5	-0.0	0.2	1.1	0.0	1.3	-0.3	-1.4	-0.8	0.1	1.0	0.5	-3.0	-1.2	-0.5		0.2	-1.3	-0.9		-1.5	0.0	0.0	1.7		-2.9	-2.7	-2.0
-0.4	-1.7	-1.2	1.0	0.9	0.3	0.3	0.4	1.2	0.0	-4.0		0.9	-0.2	-1.3	-2.8	-1.1	-0.6	-3.1	-0.0	-1.3				4.5								-0.6	-2.2	-1.5	-0.6
	0.2																																	-0.9	-2.5

Figure 14. SATOB 701 - 1000 hPa mean RMS O-B vector differences (ms-1). AUGUST 2006
All observations
Values are plotted where greater than 10 obs are present



3.4	3.1	3.3	3.2	3.1	3.2	3.0	3.4	3.5	3.1	3.3	3.2	3.0	3.1	3.2	3.4	3.5	3.6	3.3	3.4	3.5	3.1	3.4	3.2	3.2	3.1	3.2	3.6	3.4	3.6	3.3	3.2	3.4	3.3	3.4	3.4
3.5	3.2	3.5	3.5	3.5	3.6	3.8	4.0	3.9	4.0	4.0	3.4	3.7			4.5	3.8	3.7	3.2	3.4	3.3	3.2	3.1	3.2	3.2	3.3	3.4	3.6	3.4	3.4	3.2	3.2	3.2	3.1	3.3	3.4
4.4	3.0	3.8	3.4	3.0	3.7	3.8	3.5	3.7	3.7	3.8	3.5	3.4		3.6	4.5	3.2	3.2	2.7	2.5	3.1	3.2	3.6	3.5	3.1	3.2	3.8	3.6	3.1	3.3	3.8	3.5	4.1	3.2	3.5	3.6
						3.2	3.6	3.8	4.0	3.9	3.3	3.2	2.8	6.1	6.3	3.6	3.3	3.5	3.4	2.8	3.8	5.7	6.5	11.6	6.0	5.2	5.5								
					5.0	3.6	3.5	3.4	3.9	3.5	3.2	2.9	9.7	4.6	3.2	2.8	3.4	4.6	5.0	4.3	5.6	8.3	10.1	14.0	7.6	8.2	9.1	9.4			2.6	3.1	2.9	3.1	2.7
2.6					4.3	3.6	3.0	2.9	2.9	2.7	2.7	2.6	4.8	3.1	2.3	2.4	4.2	7.2	6.0	4.9	4.9	9.0	8.2	7.3	4.5	18.0		7.8	6.5	2.3	2.6	2.6	2.6	2.5	2.5
2.3						5.7	3.8	3.3	2.9	3.1	2.6	3.5	2.6	2.1	2.6	3.9	6.3	5.1	5.7	5.1	7.4	7.0	12.3	8.9	5.5	4.3	4.7	5.2	7.6	4.4	2.2	2.3	2.3	2.0	2.6
2.4						5.1	4.1	3.9	3.1	3.4	4.2	3.0	3.1	2.6	3.4	5.4	5.3	5.9	6.8	6.2	9.6	10.0	15.4	11.0	5.9	13.4	8.1	14.0	6.9	3.0	2.4	2.5	1.9	2.1	2.3
2.4						4.0	4.1	4.5	4.2	4.1	2.6	2.9	3.4	3.0	3.9	4.7	5.2	4.7	4.7	4.0	4.2	4.6	7.2	9.4	8.0	7.9	8.5	10.2	10.6	7.1	2.6	2.0	2.1	2.2	1.9
2.3						2.7	3.0	3.4	4.8	2.9	2.8	3.2	3.4	2.7	3.0	3.4	4.0	4.1	5.7	4.8	3.0	3.3	4.2	4.8	4.7	4.5	4.2	5.2	5.2	4.1	3.3	3.4	3.2	2.3	2.3
2.8						2.4	2.3	2.1	3.6	4.2	2.9	5.4	4.1	3.3	3.2	2.9	3.4	2.9	4.4	5.0	3.9	4.4	4.9	4.3	4.5	4.7	4.3	4.2	5.7	6.2	3.0	2.6	2.7	2.8	3.0
2.6						2.4	2.1	2.0	2.3	2.9	4.2	10.6	5.5	4.3	3.4	3.6	3.5	3.1	4.0	6.0	3.8	4.7	3.7	2.9	3.2	3.1	3.5	4.2	6.2				2.3	2.3	2.4
3.0					2.3	2.3	2.1	2.2	2.1	2.6	3.5	5.9	4.7	4.0	4.2	3.9	4.1	3.7	3.4	3.7	4.2	3.5	3.3	3.2	2.9	2.9	3.1	3.2	3.4	3.3	2.8	2.7	2.5	2.6	2.5
					2.4	2.5	2.3	2.4	2.0	2.3	2.3	2.6	4.0	3.9	4.0	3.5	3.6	3.8	3.6	3.7	3.8	4.9	4.7	3.9	4.1	3.3	4.5	3.5	3.1	3.2	3.2	3.0	3.0	2.8	
													2.4	4.5	4.7	5.2	5.0	4.5	4.6	4.8	4.8	4.6	5.3	4.6	3.5	3.9	3.4								
3.9	4.6	4.7	4.5	5.3	3.9	3.8	3.7	4.0	4.1	3.5	5.4	4.1	4.1	4.2	4.8	5.1	5.6	5.7	6.0	5.7	5.2	3.9		4.5	4.6	4.6		5.3	4.5	4.2	6.6		5.3	5.0	5.2
4.7	5.1	4.7	4.2	4.3	4.4	4.2	4.0	4.5	3.8	4.7		4.4	4.8	4.4	5.0	5.1	4.6	7.1	5.8	6.8				5.7								3.8	4.4	4.9	5.1
	2.6																																	3.9	4.3

Figure 15. SATOB 401 - 700 hPa mean daily count. AUGUST 2006
Global average number of observations in 24 hours = 74241



113	119	116	115	115	112	114	124	110	115	98	91	88	99	96	106	108	112	118	127	136	135	124	119	127	132	135	149	149	135	129	119	116	122	128	114
235	243	238	204	170	139	124	123	115	133	164	164	156	180	155	138	133	170	215	219	210	215	197	196	193	203	231	243	253	201	170	165	201	228	253	241
21	15	9	12	10	5	9	16	18	25	26	28	27	30	30	18	10	16	6	4	15	20	21	25	11	21	22	18	24	13	13	12	20	18	25	25
						17	35	54	77	101	145	120	34	12	95	275	209	314	209	108	27	18	32	40	51	35	8								
					5	66	63	59	95	151	151	82	44	154	194	231	225	364	269	263	141	59	20	17	34	22	11	9	1	1	1	1	1	1	0
					1	42	33	35	46	43	33	21	143	259	144	86	133	205	114	33	75	189	44	28	23	24	21	11	5	1	0	0	1	0	0
0						9	23	9	9	18	16	25	113	150	215	253	600	486	275	56	161	464	68	14	28	14	16	20	6	0	0	0	0	0	0
0						2	6	9	9	7	21	129	313	340	349	257	379	353	504	516	358	456	135	26	22	10	5	3	2	0	0	0	0	0	0
0						1	23	22	19	58	58	566	845	754	443	324	375	379	189	215	383	376	39	2	5	4	2	1	4	1	0	1	0	0	0
0						1	10	9	18	83	29	285	369	434	40	8	26	171	371	263	564	445	151	8	11	11	5	5	6	3	2	1	1	0	0
1						2	13	15	49	19	14	199	408	232	81	54	54	214	250	434	601	503	365	48	45	59	41	27	4	0	0	0	1	2	2
4						20	34	32	28	22	11	142	376	379	225	179	79	88	109	326	415	367	230	81	72	74	72	56	15	1	2	3	6	11	7
4					27	88	77	115	138	104	48	80	379	442	537	516	654	750	559	479	413	429	135	135	167	187	145	120	65	20	20	13	17	16	15
					30	87	110	118	126	103	53	93	191	654	741	881	911	841	719	545	348	126	87	116	118	129	123	69	18	27	31	25	20	11	1
							0	0	0				0	37	339	695	752	661	420	247	59	30	47	51	41	28	15	0							
20	39	79	62	53	25	38	55	64	45	20	32	116	81	62	82	91	77	53	21	23	23	20	15	33	72	57	17	29	51	54	31	15	21	40	21
460	524	566	481	408	369	419	439	443	378	359	453	517	582	436	293	284	228	213	140	131	121	115	154	199	182	127	87	110	168	188	216	242	286	346	338
122	134	141	133	127	104	101	101	89	80	70	80	77	75	65	64	57	58	56	50	44	38	28	26	25	29	34	51	48	54	66	70	67	89	112	112

Figure 16. SATOB 401 - 700 hPa vector mean wind. AUGUST 2006
All observations
Arrows are plotted where greater than 10 obs are present

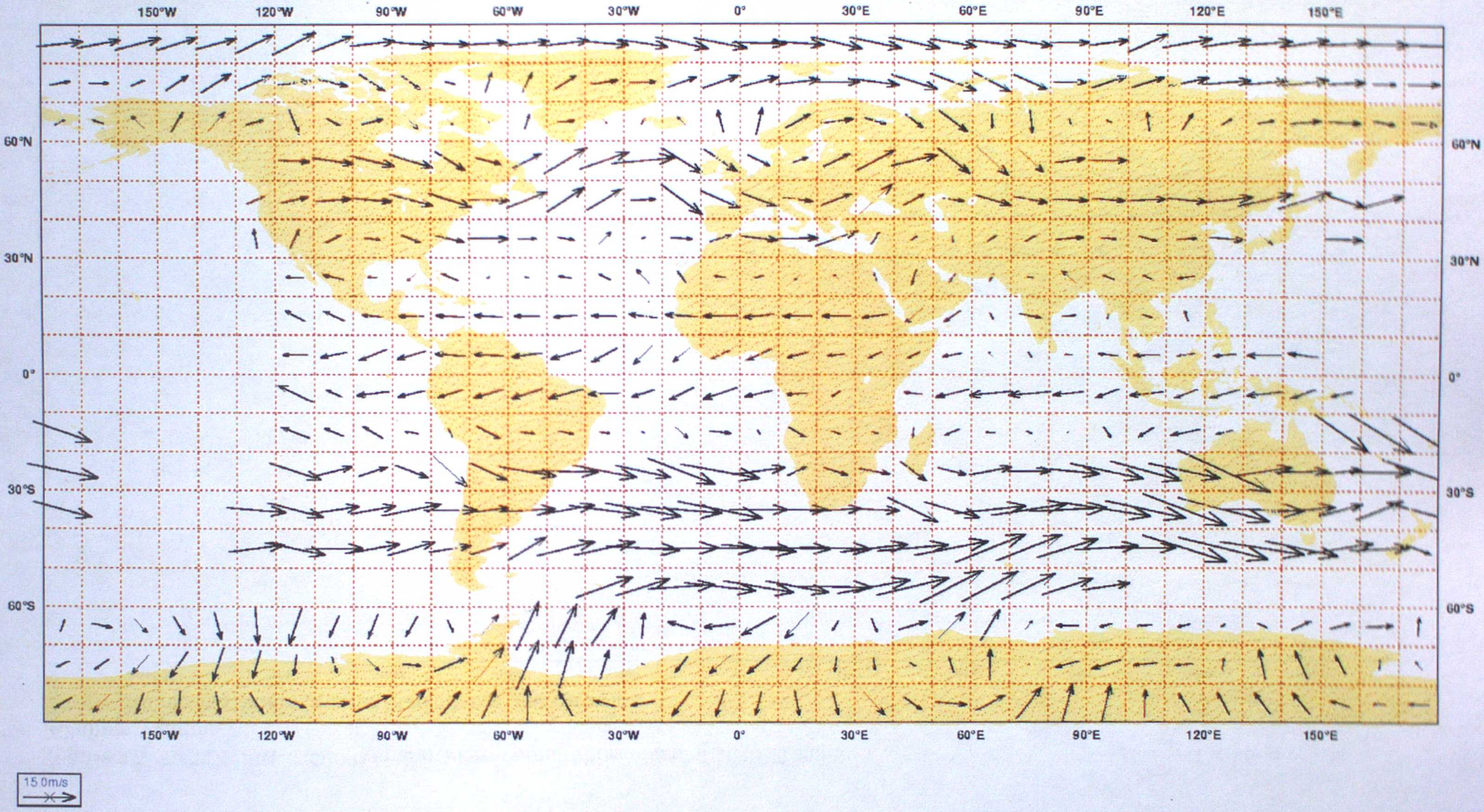

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
15.0m/s

Figure 17. SATOB 401 - 700 hPa mean vector wind differences. AUGUST 2006
All observations
Arrows are plotted where greater than 10 obs are present

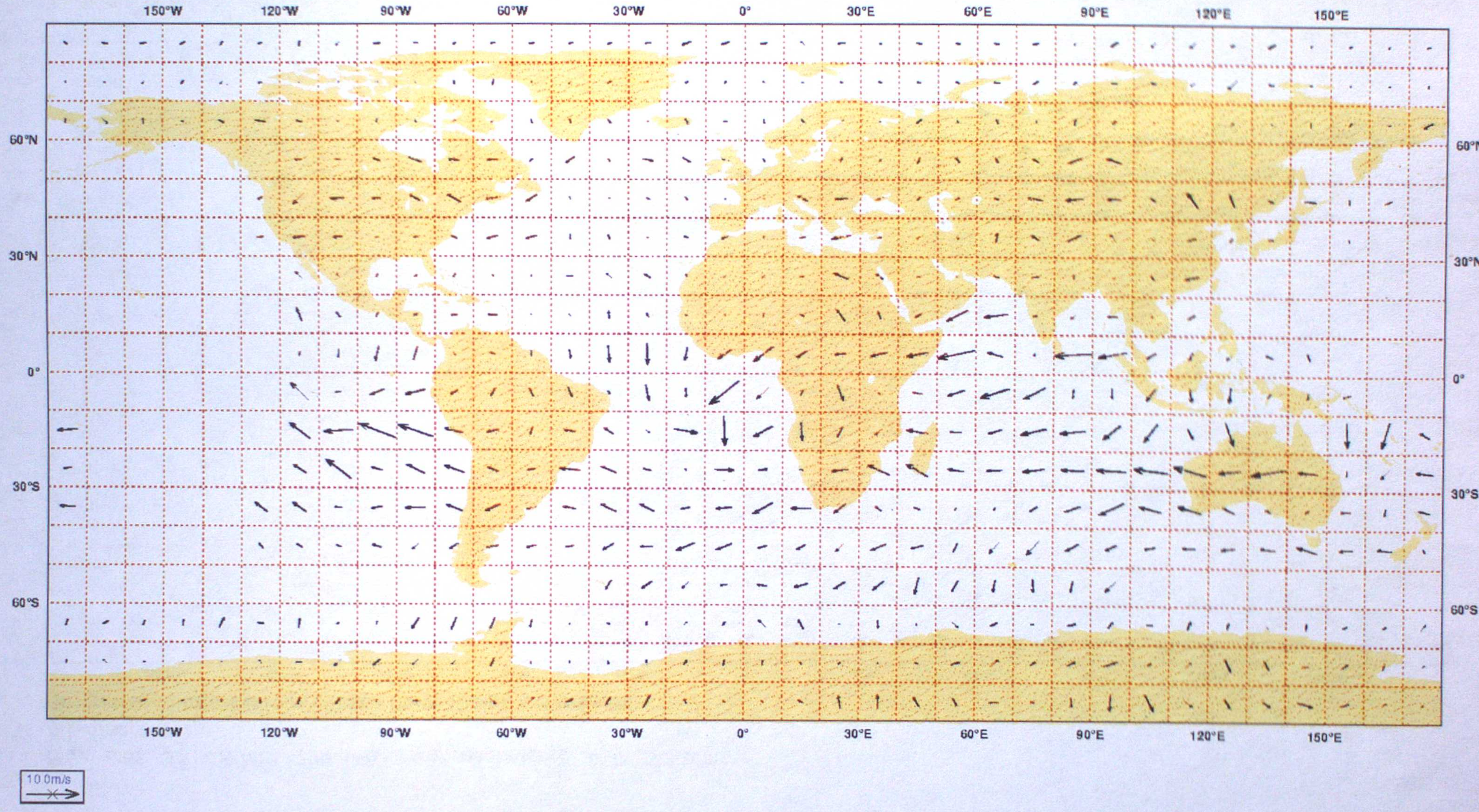
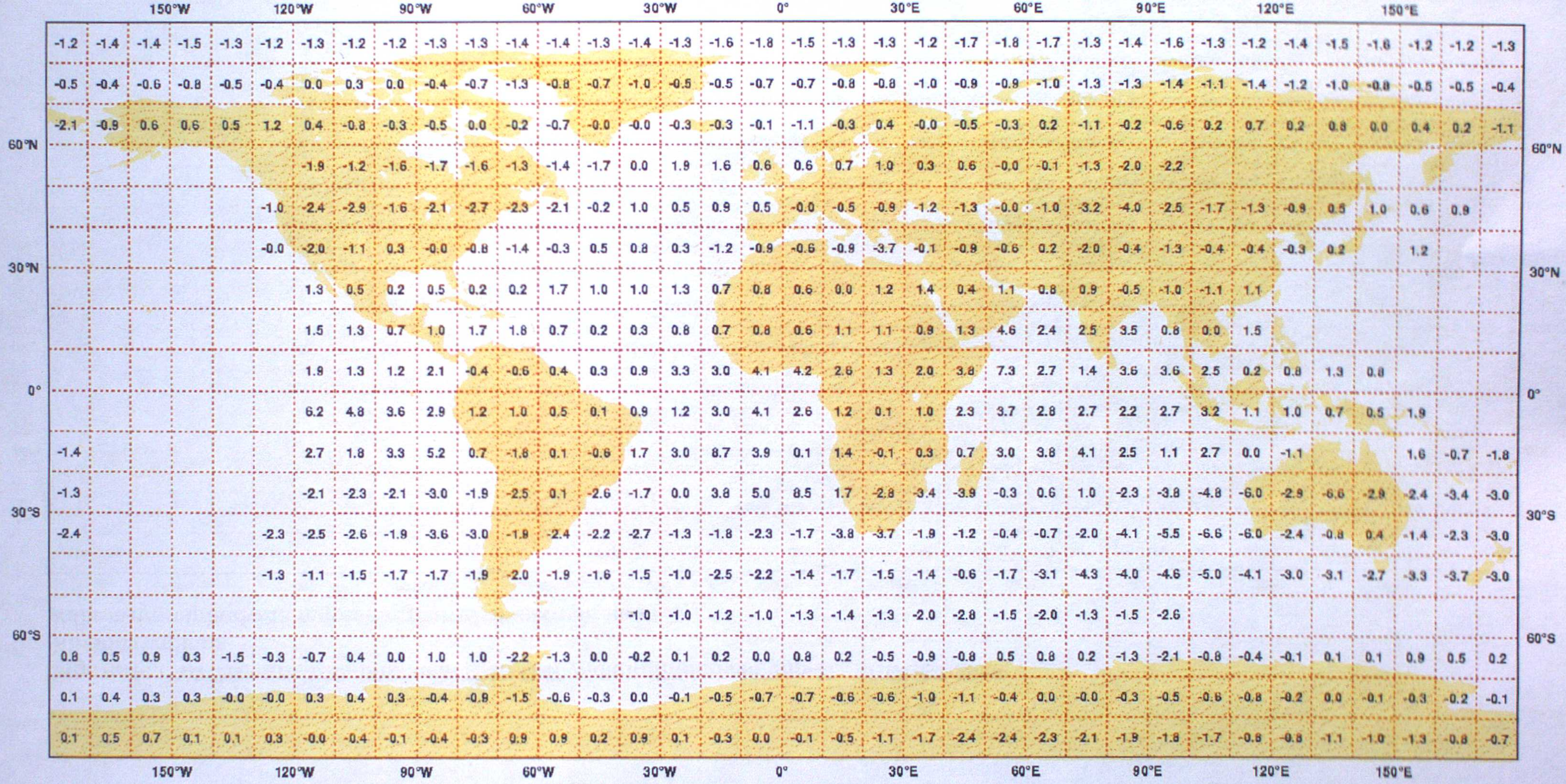

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
10.0m/s

Figure 18. SATOB 401 - 700 hPa mean O-B speed differences (ms-1). AUGUST 2006
All observations
Values are plotted where greater than 10 obs are present

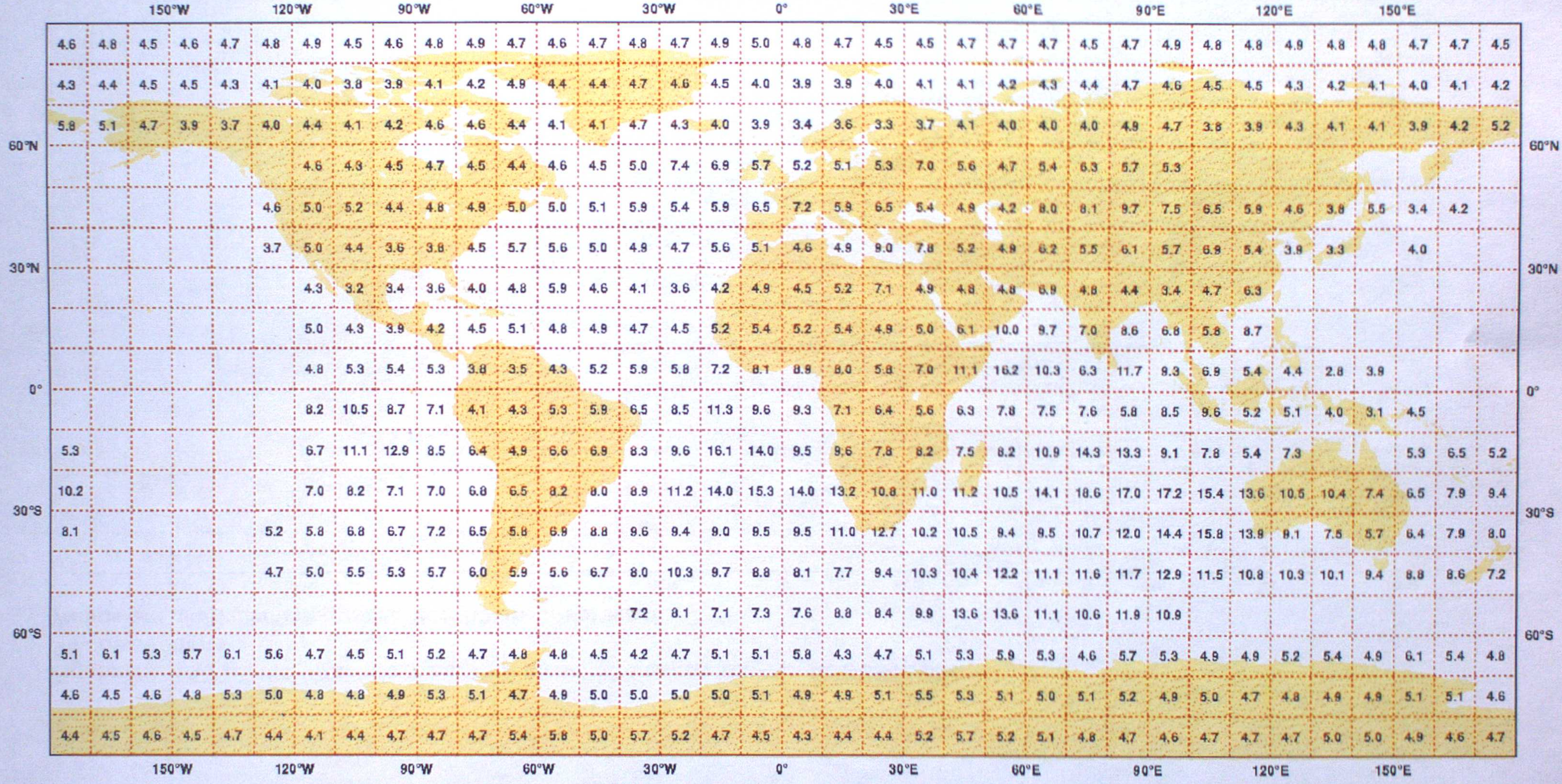


-1.2	-1.4	-1.4	-1.5	-1.3	-1.2	-1.3	-1.2	-1.2	-1.3	-1.3	-1.4	-1.4	-1.3	-1.4	-1.3	-1.6	-1.8	-1.5	-1.3	-1.3	-1.2	-1.7	-1.8	-1.7	-1.3	-1.4	-1.6	-1.3	-1.2	-1.4	-1.5	-1.6	-1.2	-1.2	-1.3
-0.5	-0.4	-0.6	-0.8	-0.5	-0.4	0.0	0.3	0.0	-0.4	-0.7	-1.3	-0.8	-0.7	-1.0	-0.5	-0.5	-0.7	-0.7	-0.8	-0.8	-1.0	-0.9	-0.9	-1.0	-1.3	-1.3	-1.4	-1.1	-1.4	-1.2	-1.0	-0.8	-0.5	-0.5	-0.4
-2.1	-0.9	0.6	0.6	0.5	1.2	0.4	-0.8	-0.3	-0.5	0.0	-0.2	-0.7	-0.0	-0.0	-0.3	-0.3	-0.1	-1.1	-0.3	0.4	-0.0	-0.5	-0.3	0.2	-1.1	-0.2	-0.6	0.2	0.7	0.2	0.8	0.0	0.4	0.2	-1.1
						-1.9	-1.2	-1.6	-1.7	-1.6	-1.3	-1.4	-1.7	0.0	1.9	1.6	0.6	0.6	0.7	1.0	0.3	0.6	-0.0	-0.1	-1.3	-2.0	-2.2								
					-1.0	-2.4	-2.9	-1.6	-2.1	-2.7	-2.3	-2.1	-0.2	1.0	0.5	0.9	0.5	-0.0	-0.5	-0.9	-1.2	-1.3	-0.0	-1.0	-3.2	-4.0	-2.5	-1.7	-1.3	-0.9	0.5	1.0	0.6	0.9	
					-0.0	-2.0	-1.1	0.3	-0.0	-0.8	-1.4	-0.3	0.5	0.8	0.3	-1.2	-0.9	-0.6	-0.9	-3.7	-0.1	-0.9	-0.6	0.2	-2.0	-0.4	-1.3	-0.4	-0.4	-0.3	0.2		1.2		
						1.3	0.5	0.2	0.5	0.2	0.2	1.7	1.0	1.0	1.3	0.7	0.8	0.6	0.0	1.2	1.4	0.4	1.1	0.8	0.9	-0.5	-1.0	-1.1	1.1						
						1.5	1.3	0.7	1.0	1.7	1.8	0.7	0.2	0.3	0.8	0.7	0.8	0.6	1.1	1.1	0.9	1.3	4.6	2.4	2.5	3.5	0.8	0.0	1.5						
						1.9	1.3	1.2	2.1	-0.4	-0.6	0.4	0.3	0.9	3.3	3.0	4.1	4.2	2.6	1.3	2.0	3.8	7.3	2.7	1.4	3.6	3.6	2.5	0.2	0.8	1.3	0.8			
						6.2	4.8	3.6	2.9	1.2	1.0	0.5	0.1	0.9	1.2	3.0	4.1	2.6	1.2	0.1	1.0	2.3	3.7	2.8	2.7	2.2	2.7	3.2	1.1	1.0	0.7	0.5	1.9		
-1.4						2.7	1.8	3.3	5.2	0.7	-1.8	0.1	-0.6	1.7	3.0	8.7	3.9	0.1	1.4	-0.1	0.3	0.7	3.0	3.8	4.1	2.5	1.1	2.7	0.0	-1.1			1.6	-0.7	-1.8
-1.3						-2.1	-2.3	-2.1	-3.0	-1.9	-2.5	0.1	-2.6	-1.7	0.0	3.8	5.0	8.5	1.7	-2.8	-3.4	-3.9	-0.3	0.6	1.0	-2.3	-3.8	-4.8	-6.0	-2.9	-6.6	-2.9	-2.4	-3.4	-3.0
-2.4					-2.3	-2.5	-2.6	-1.9	-3.6	-3.0	-1.9	-2.4	-2.2	-2.7	-1.3	-1.8	-2.3	-1.7	-3.8	-3.7	-1.9	-1.2	-0.4	-0.7	-2.0	-4.1	-5.5	-6.6	-6.0	-2.4	-0.8	0.4	-1.4	-2.3	-3.0
					-1.3	-1.1	-1.5	-1.7	-1.7	-1.9	-2.0	-1.9	-1.6	-1.5	-1.0	-2.5	-2.2	-1.4	-1.7	-1.5	-1.4	-0.6	-1.7	-3.1	-4.3	-4.0	-4.6	-5.0	-4.1	-3.0	-3.1	-2.7	-3.3	-3.7	-3.0
														-1.0	-1.0	-1.2	-1.0	-1.3	-1.4	-1.3	-2.0	-2.8	-1.5	-2.0	-1.3	-1.5	-2.6								
0.8	0.5	0.9	0.3	-1.5	-0.3	-0.7	0.4	0.0	1.0	1.0	-2.2	-1.3	0.0	-0.2	0.1	0.2	0.0	0.8	0.2	-0.5	-0.9	-0.8	0.5	0.8	0.2	-1.3	-2.1	-0.8	-0.4	-0.1	0.1	0.1	0.9	0.5	0.2
0.1	0.4	0.3	0.3	-0.0	-0.0	0.3	0.4	0.3	-0.4	-0.9	-1.5	-0.6	-0.3	0.0	-0.1	-0.5	-0.7	-0.7	-0.6	-0.6	-1.0	-1.1	-0.4	0.0	-0.0	-0.3	-0.5	-0.6	-0.8	-0.2	0.0	-0.1	-0.3	-0.2	-0.1
0.1	0.5	0.7	0.1	0.1	0.3	-0.0	-0.4	-0.1	-0.4	-0.3	0.9	0.9	0.2	0.9	0.1	-0.3	0.0	-0.1	-0.5	-1.1	-1.7	-2.4	-2.4	-2.3	-2.1	-1.9	-1.8	-1.7	-0.8	-0.8	-1.1	-1.0	-1.3	-0.8	-0.7

Figure 19. SATOB 401 - 700 hPa mean RMS O-B vector differences (ms-1). AUGUST 2006

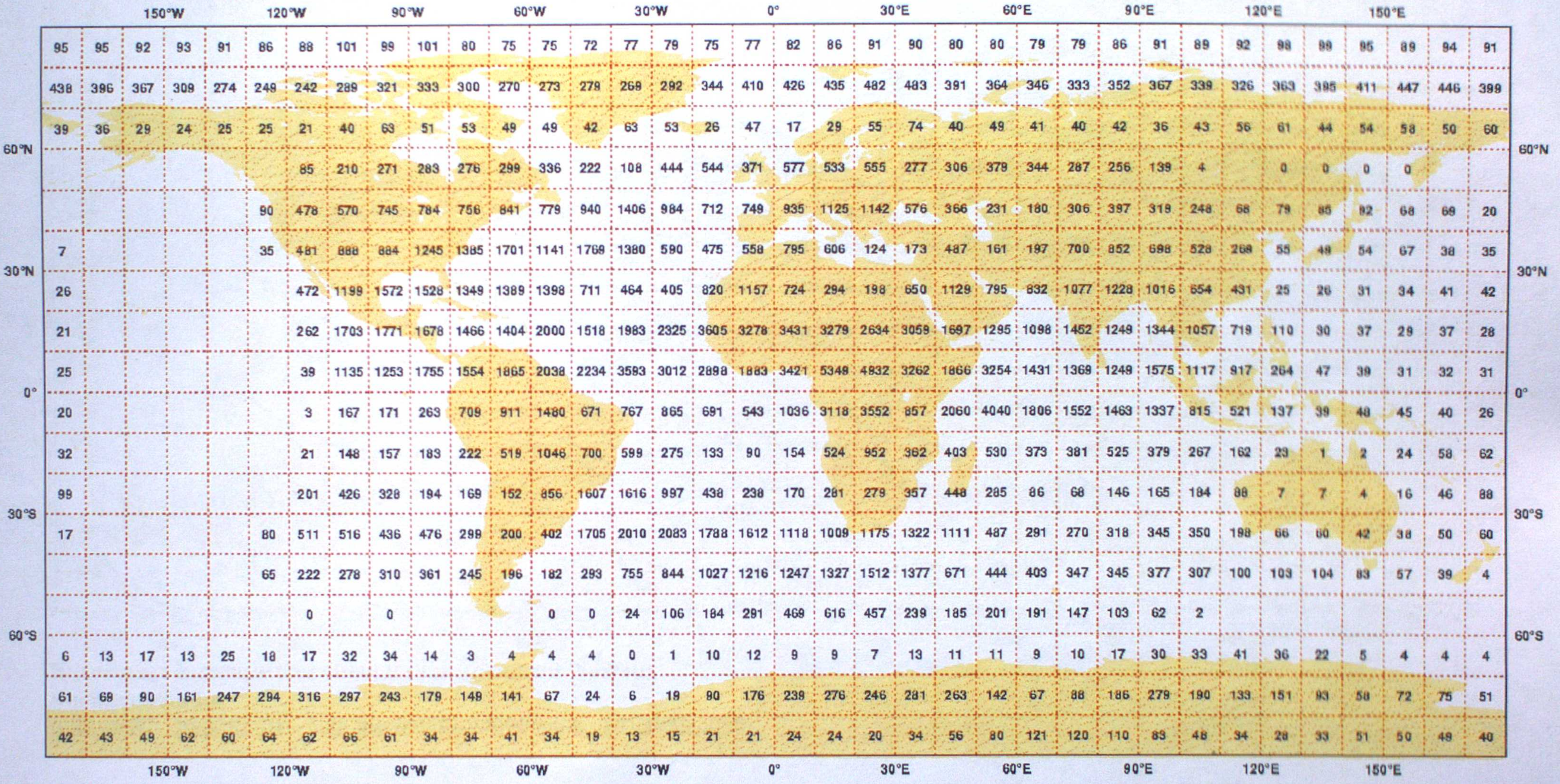
All observations

Values are plotted where greater than 10 obs are present



4.6	4.8	4.5	4.6	4.7	4.8	4.9	4.5	4.6	4.8	4.9	4.7	4.6	4.7	4.8	4.7	4.9	5.0	4.8	4.7	4.5	4.5	4.7	4.7	4.7	4.5	4.7	4.9	4.8	4.8	4.9	4.8	4.8	4.7	4.7	4.5
4.3	4.4	4.5	4.5	4.3	4.1	4.0	3.8	3.9	4.1	4.2	4.9	4.4	4.4	4.7	4.6	4.5	4.0	3.9	3.9	4.0	4.1	4.1	4.2	4.3	4.4	4.7	4.6	4.5	4.5	4.3	4.2	4.1	4.0	4.1	4.2
5.8	5.1	4.7	3.9	3.7	4.0	4.4	4.1	4.2	4.6	4.6	4.4	4.1	4.1	4.7	4.3	4.0	3.9	3.4	3.6	3.3	3.7	4.1	4.0	4.0	4.0	4.9	4.7	3.8	3.9	4.3	4.1	4.1	3.9	4.2	5.2
						4.6	4.3	4.5	4.7	4.5	4.4	4.6	4.5	5.0	7.4	6.9	5.7	5.2	5.1	5.3	7.0	5.6	4.7	5.4	6.3	5.7	5.3								
					4.6	5.0	5.2	4.4	4.8	4.9	5.0	5.0	5.1	5.9	5.4	5.9	6.5	7.2	5.9	6.5	5.4	4.9	4.2	8.0	8.1	9.7	7.5	6.5	5.8	4.6	3.8	5.5	3.4	4.2	
					3.7	5.0	4.4	3.6	3.8	4.5	5.7	5.6	5.0	4.9	4.7	5.6	5.1	4.6	4.9	9.0	7.8	5.2	4.9	6.2	5.5	6.1	5.7	6.9	5.4	3.9	3.3		4.0		
						4.3	3.2	3.4	3.6	4.0	4.8	5.9	4.6	4.1	3.6	4.2	4.9	4.5	5.2	7.1	4.9	4.8	4.8	6.9	4.8	4.4	3.4	4.7	6.3						
						5.0	4.3	3.9	4.2	4.5	5.1	4.8	4.9	4.7	4.5	5.2	5.4	5.2	5.4	4.9	5.0	6.1	10.0	9.7	7.0	8.6	6.8	5.8	8.7						
						4.8	5.3	5.4	5.3	3.8	3.5	4.3	5.2	5.9	5.8	7.2	8.1	8.9	8.0	5.8	7.0	11.1	16.2	10.3	6.3	11.7	9.3	6.9	5.4	4.4	2.8	3.9			
						8.2	10.5	8.7	7.1	4.1	4.3	5.3	5.9	6.5	8.5	11.3	9.6	9.3	7.1	6.4	5.6	6.3	7.8	7.5	7.6	5.8	8.5	9.6	5.2	5.1	4.0	3.1	4.5		
5.3						6.7	11.1	12.9	8.5	6.4	4.9	6.6	6.9	8.3	9.6	16.1	14.0	9.5	9.6	7.8	8.2	7.5	8.2	10.9	14.3	13.3	9.1	7.8	5.4	7.3			5.3	6.5	5.2
10.2						7.0	8.2	7.1	7.0	6.8	6.5	8.2	8.0	8.9	11.2	14.0	15.3	14.0	13.2	10.8	11.0	11.2	10.5	14.1	18.6	17.0	17.2	15.4	13.6	10.5	10.4	7.4	6.5	7.9	9.4
8.1					5.2	5.8	6.8	6.7	7.2	6.5	5.8	6.9	8.8	9.6	9.4	9.0	9.5	9.5	11.0	12.7	10.2	10.5	9.4	9.5	10.7	12.0	14.4	15.8	13.9	9.1	7.5	5.7	6.4	7.9	8.0
					4.7	5.0	5.5	5.3	5.7	6.0	5.9	5.6	6.7	8.0	10.3	9.7	8.8	8.1	7.7	9.4	10.3	10.4	12.2	11.1	11.6	11.7	12.9	11.5	10.8	10.3	10.1	9.4	8.8	8.6	7.2
														7.2	8.1	7.1	7.3	7.6	8.8	8.4	9.9	13.6	13.6	11.1	10.6	11.9	10.9								
5.1	6.1	5.3	5.7	6.1	5.6	4.7	4.5	5.1	5.2	4.7	4.8	4.8	4.5	4.2	4.7	5.1	5.1	5.8	4.3	4.7	5.1	5.3	5.9	5.3	4.6	5.7	5.3	4.9	4.9	5.2	5.4	4.9	6.1	5.4	4.8
4.6	4.5	4.6	4.8	5.3	5.0	4.8	4.8	4.9	5.3	5.1	4.7	4.9	5.0	5.0	5.0	5.0	5.1	4.9	4.9	5.1	5.5	5.3	5.1	5.0	5.1	5.2	4.9	5.0	4.7	4.8	4.9	4.9	5.1	5.1	4.6
4.4	4.5	4.6	4.5	4.7	4.4	4.1	4.4	4.7	4.7	4.7	5.4	5.8	5.0	5.7	5.2	4.7	4.5	4.3	4.4	4.4	5.2	5.7	5.2	5.1	4.8	4.7	4.6	4.7	4.7	4.7	5.0	5.0	4.9	4.6	4.7

Figure 20. SATOB 101 - 400 hPa mean daily count. AUGUST 2006
Global average number of observations in 24 hours = 275381



95	95	92	93	91	86	88	101	99	101	80	75	75	72	77	79	75	77	82	86	91	90	80	80	79	79	86	91	89	92	98	99	95	89	94	91
438	396	367	309	274	249	242	289	321	333	300	270	273	279	269	292	344	410	426	435	482	483	391	364	346	333	352	367	339	326	363	395	411	447	446	399
39	36	29	24	25	25	21	40	63	51	53	49	49	42	63	53	26	47	17	29	55	74	40	49	41	40	42	36	43	56	61	44	54	58	50	60
						85	210	271	283	276	299	336	222	108	444	544	371	577	533	555	277	306	379	344	287	256	139	4		0	0	0	0		
					90	478	570	745	784	756	841	779	940	1406	984	712	749	935	1125	1142	576	366	231	180	306	397	318	248	68	79	85	82	68	69	20
7					35	481	888	884	1245	1385	1701	1141	1769	1380	590	475	558	795	606	124	173	487	161	197	700	852	698	528	268	55	49	54	67	38	35
26						472	1199	1572	1528	1349	1389	1398	711	464	405	820	1157	724	294	198	650	1129	795	832	1077	1228	1016	654	431	25	26	31	34	41	42
21						262	1703	1771	1678	1466	1404	2000	1518	1983	2325	3605	3278	3431	3279	2634	3059	1697	1295	1098	1452	1249	1344	1057	719	110	30	37	29	37	28
25						39	1135	1253	1755	1554	1865	2038	2234	3583	3012	2898	1883	3421	5348	4832	3262	1866	3254	1431	1369	1249	1575	1117	917	264	47	39	31	32	31
20						3	167	171	263	709	911	1480	671	767	865	691	543	1036	3118	3552	857	2060	4040	1806	1552	1463	1337	815	521	137	39	48	45	40	26
32						21	148	157	183	222	519	1046	700	599	275	133	90	154	524	952	362	403	530	373	381	525	379	267	162	23	1	2	24	58	62
99						201	426	328	194	169	152	856	1607	1616	997	438	238	170	281	279	357	448	285	86	68	146	165	184	88	7	7	4	16	46	88
17					80	511	516	436	476	299	200	402	1705	2010	2083	1788	1612	1118	1009	1175	1322	1111	487	291	270	318	345	350	198	66	60	42	38	50	60
					65	222	278	310	361	245	196	182	293	755	844	1027	1216	1247	1327	1512	1377	671	444	403	347	345	377	307	100	103	104	83	57	39	4
						0		0				0	0	24	106	184	291	469	616	457	239	185	201	191	147	103	62	2							
6	13	17	13	25	18	17	32	34	14	3	4	4	4	0	1	10	12	9	9	7	13	11	11	9	10	17	30	33	41	36	22	5	4	4	4
61	68	90	161	247	284	316	287	243	179	149	141	67	24	6	19	80	176	239	276	246	281	263	142	67	88	186	279	190	133	151	93	58	72	75	51
42	43	49	62	60	64	62	66	61	34	34	41	34	19	13	15	21	21	24	24	20	34	56	80	121	120	110	83	48	34	28	33	51	50	49	40

Figure 21. SATOB 101 - 400 hPa vector mean wind. AUGUST 2006
All observations
Arrows are plotted where greater than 10 obs are present

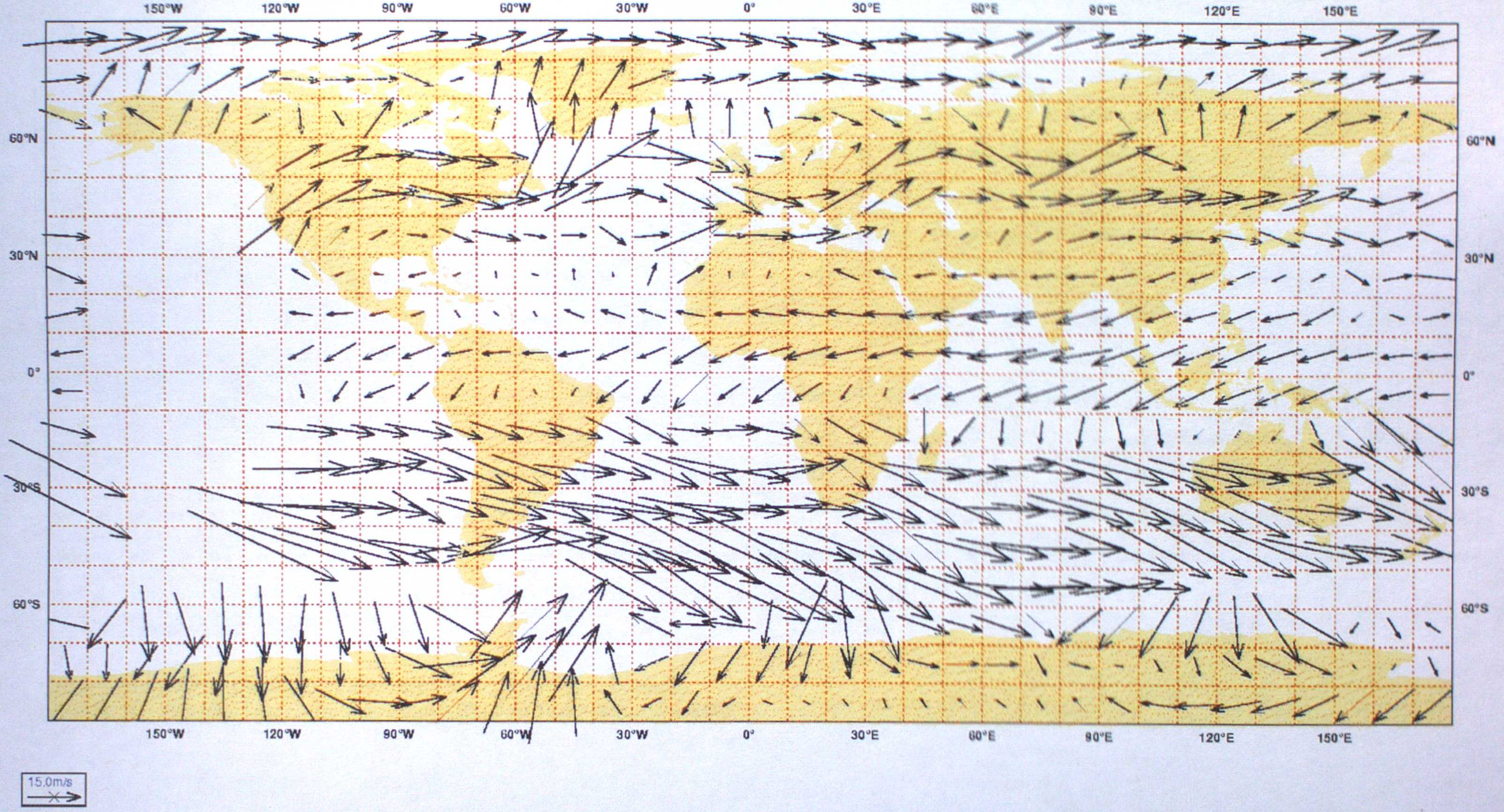

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
15.0m/s

Figure 22. SATOB 101 - 400 hPa mean vector wind differences. AUGUST 2006
All observations
Arrows are plotted where greater than 10 obs are present

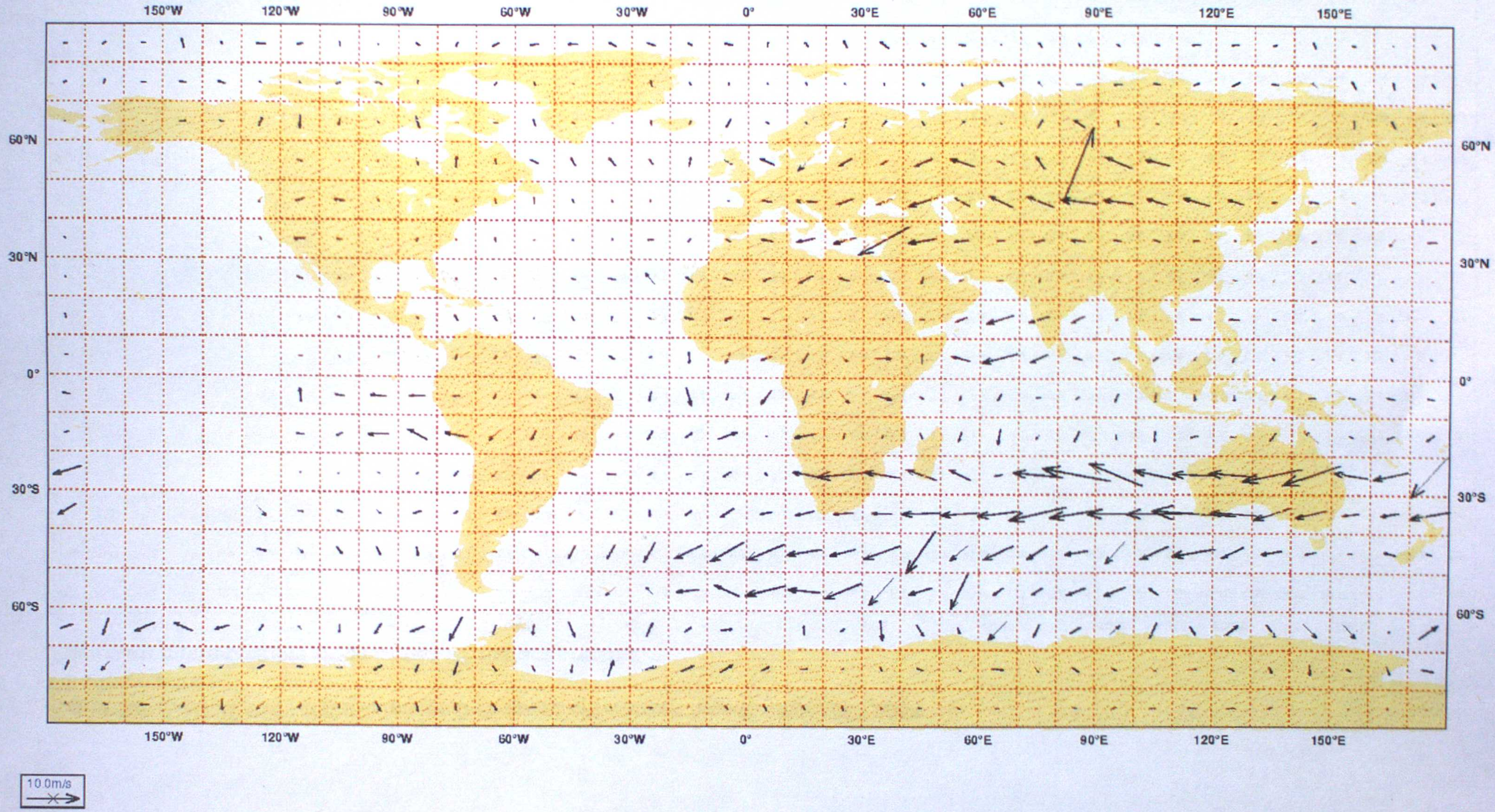
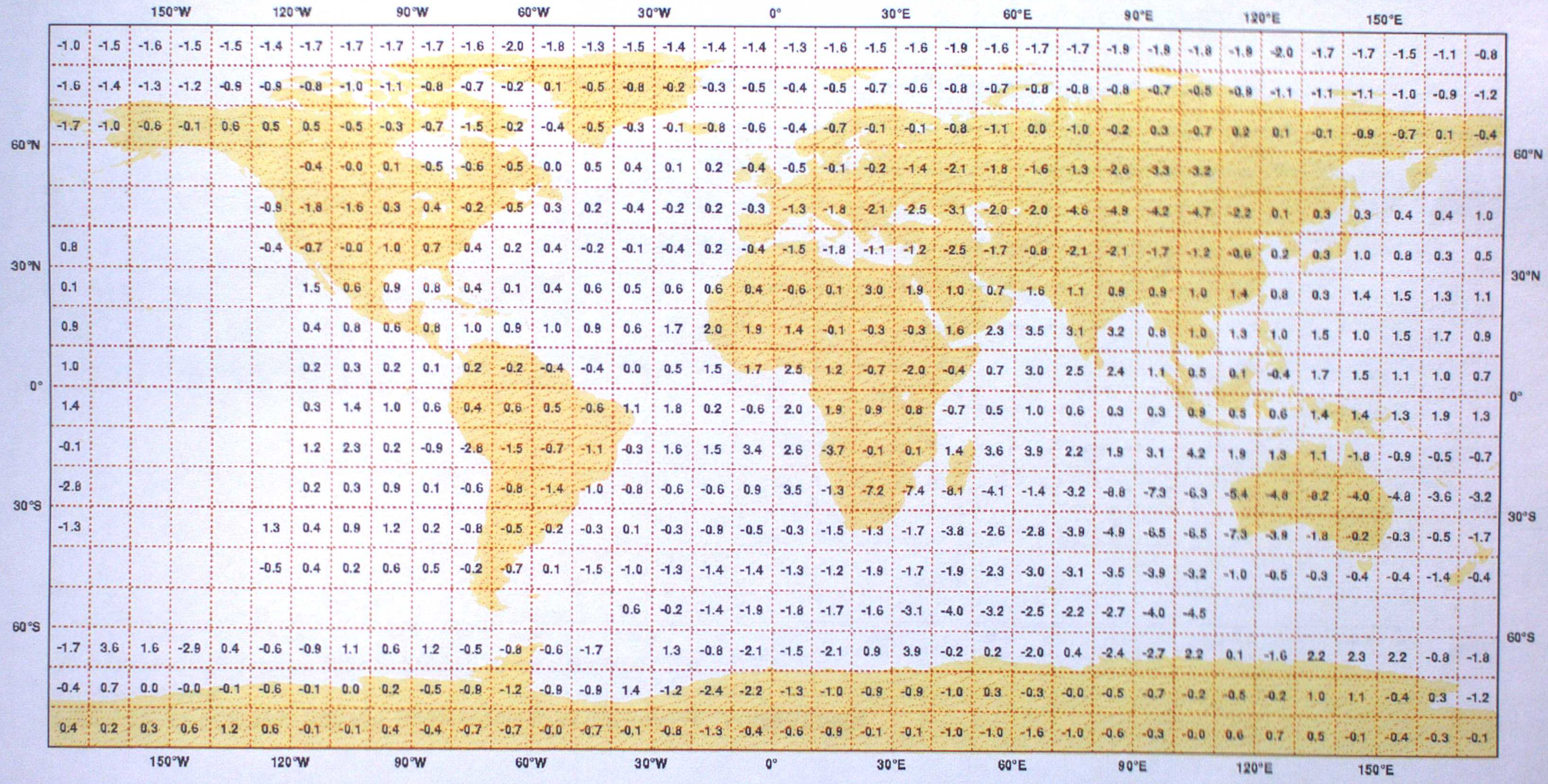
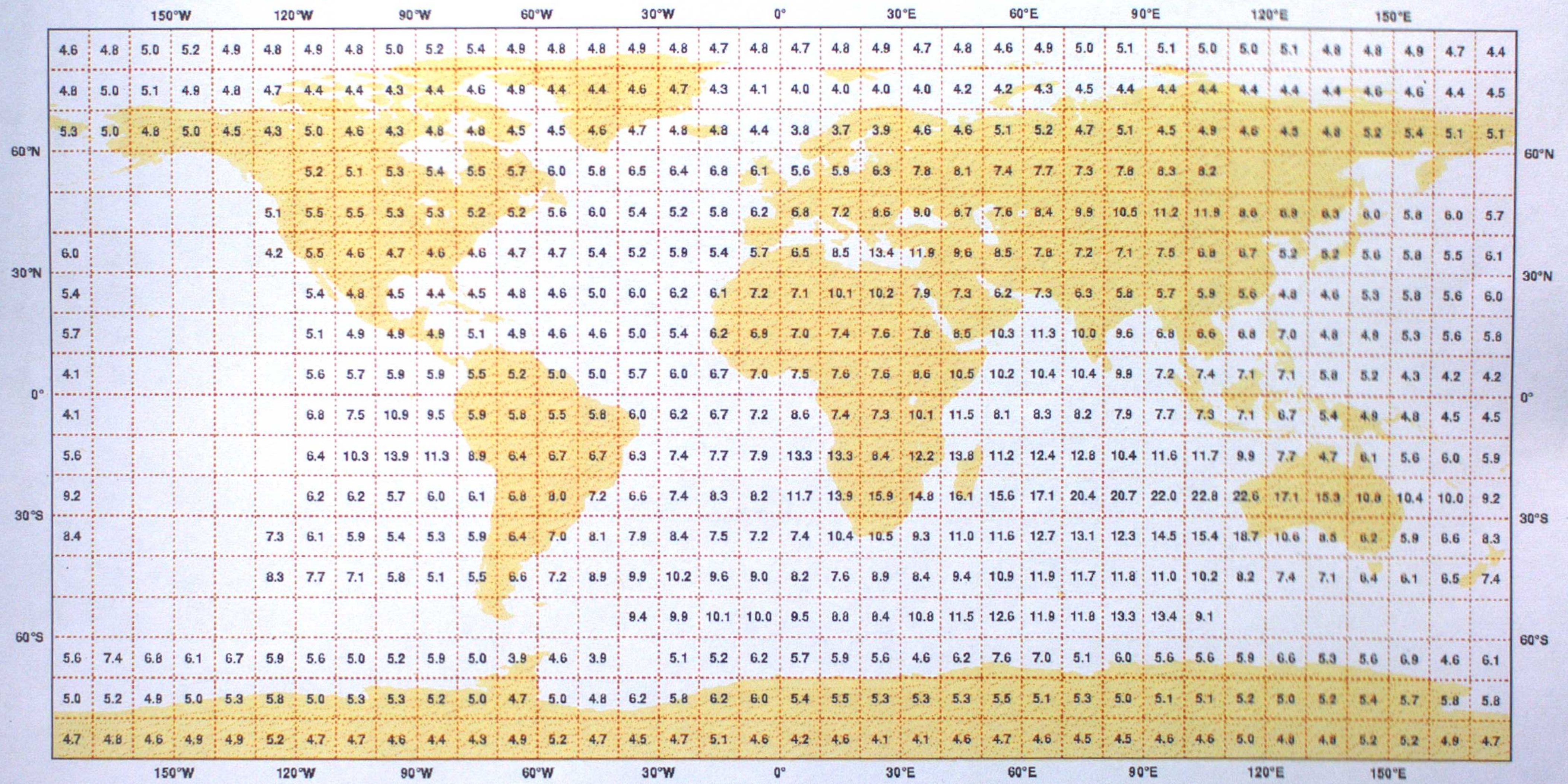

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
10.0m/s

Figure 23. SATOB 101 - 400 hPa mean O-B speed differences (ms-1). AUGUST 2006
All observations
Values are plotted where greater than 10 obs are present



-1.0	-1.5	-1.6	-1.5	-1.5	-1.4	-1.7	-1.7	-1.7	-1.7	-1.6	-2.0	-1.8	-1.3	-1.5	-1.4	-1.4	-1.4	-1.3	-1.6	-1.5	-1.6	-1.9	-1.6	-1.7	-1.7	-1.9	-1.8	-1.8	-1.8	-2.0	-1.7	-1.7	-1.5	-1.1	-0.8
-1.6	-1.4	-1.3	-1.2	-0.9	-0.8	-0.8	-1.0	-1.1	-0.8	-0.7	-0.2	0.1	-0.5	-0.8	-0.2	-0.3	-0.5	-0.4	-0.5	-0.7	-0.6	-0.8	-0.7	-0.8	-0.8	-0.8	-0.7	-0.5	-0.9	-1.1	-1.1	-1.1	-1.0	-0.9	-1.2
-1.7	-1.0	-0.6	-0.1	0.6	0.5	0.5	-0.5	-0.3	-0.7	-1.5	-0.2	-0.4	-0.5	-0.3	-0.1	-0.8	-0.6	-0.4	-0.7	-0.1	-0.1	-0.8	-1.1	0.0	-1.0	-0.2	0.3	-0.7	0.2	0.1	-0.1	-0.9	-0.7	0.1	-0.4
						-0.4	-0.0	0.1	-0.5	-0.6	-0.5	0.0	0.5	0.4	0.1	0.2	-0.4	-0.5	-0.1	-0.2	-1.4	-2.1	-1.8	-1.6	-1.3	-2.6	-3.3	-3.2							
					-0.9	-1.8	-1.6	0.3	0.4	-0.2	-0.5	0.3	0.2	-0.4	-0.2	0.2	-0.3	-1.3	-1.8	-2.1	-2.5	-3.1	-2.0	-2.0	-4.6	-4.9	-4.2	-4.7	-2.2	0.1	0.3	0.3	0.4	0.4	1.0
0.8					-0.4	-0.7	-0.0	1.0	0.7	0.4	0.2	0.4	-0.2	-0.1	-0.4	0.2	-0.4	-1.5	-1.8	-1.1	-1.2	-2.5	-1.7	-0.8	-2.1	-2.1	-1.7	-1.2	-0.6	0.2	0.3	1.0	0.8	0.3	0.5
0.1						1.5	0.6	0.9	0.8	0.4	0.1	0.4	0.6	0.5	0.6	0.6	0.4	-0.6	0.1	3.0	1.9	1.0	0.7	1.6	1.1	0.9	0.9	1.0	1.4	0.8	0.3	1.4	1.5	1.3	1.1
0.9						0.4	0.8	0.6	0.8	1.0	0.9	1.0	0.9	0.6	1.7	2.0	1.9	1.4	-0.1	-0.3	-0.3	1.6	2.3	3.5	3.1	3.2	0.8	1.0	1.3	1.0	1.5	1.0	1.5	1.7	0.9
1.0						0.2	0.3	0.2	0.1	0.2	-0.2	-0.4	-0.4	0.0	0.5	1.5	1.7	2.5	1.2	-0.7	-2.0	-0.4	0.7	3.0	2.5	2.4	1.1	0.5	0.1	-0.4	1.7	1.5	1.1	1.0	0.7
1.4						0.3	1.4	1.0	0.6	0.4	0.6	0.5	-0.6	1.1	1.8	0.2	-0.6	2.0	1.9	0.9	0.8	-0.7	0.5	1.0	0.6	0.3	0.3	0.9	0.5	0.6	1.4	1.4	1.3	1.9	1.3
-0.1						1.2	2.3	0.2	-0.9	-2.8	-1.5	-0.7	-1.1	-0.3	1.6	1.5	3.4	2.6	-3.7	-0.1	0.1	1.4	3.6	3.9	2.2	1.9	3.1	4.2	1.9	1.3	1.1	-1.8	-0.9	-0.5	-0.7
-2.8						0.2	0.3	0.9	0.1	-0.6	-0.8	-1.4	-1.0	-0.8	-0.6	-0.6	0.9	3.5	-1.3	-7.2	-7.4	-8.1	-4.1	-1.4	-3.2	-8.8	-7.3	-6.3	-5.4	-4.8	-8.2	-4.0	-4.8	-3.6	-3.2
-1.3					1.3	0.4	0.9	1.2	0.2	-0.8	-0.5	-0.2	-0.3	0.1	-0.3	-0.9	-0.5	-0.3	-1.5	-1.3	-1.7	-3.8	-2.6	-2.8	-3.9	-4.9	-6.5	-6.5	-7.3	-3.8	-1.8	-0.2	-0.3	-0.5	-1.7
					-0.5	0.4	0.2	0.6	0.5	-0.2	-0.7	0.1	-1.5	-1.0	-1.3	-1.4	-1.4	-1.3	-1.2	-1.9	-1.7	-1.9	-2.3	-3.0	-3.1	-3.5	-3.9	-3.2	-1.0	-0.5	-0.3	-0.4	-0.4	-1.4	-0.4
														0.6	-0.2	-1.4	-1.9	-1.8	-1.7	-1.6	-3.1	-4.0	-3.2	-2.5	-2.2	-2.7	-4.0	-4.5							
-1.7	3.6	1.6	-2.9	0.4	-0.6	-0.9	1.1	0.6	1.2	-0.5	-0.8	-0.6	-1.7		1.3	-0.8	-2.1	-1.5	-2.1	0.9	3.9	-0.2	0.2	-2.0	0.4	-2.4	-2.7	2.2	0.1	-1.6	2.2	2.3	2.2	-0.8	-1.8
-0.4	0.7	0.0	-0.0	-0.1	-0.6	-0.1	0.0	0.2	-0.5	-0.9	-1.2	-0.9	-0.9	1.4	-1.2	-2.4	-2.2	-1.3	-1.0	-0.9	-0.9	-1.0	0.3	-0.3	-0.0	-0.5	-0.7	-0.2	-0.5	-0.2	1.0	1.1	-0.4	0.3	-1.2
0.4	0.2	0.3	0.6	1.2	0.6	-0.1	-0.1	0.4	-0.4	-0.7	-0.7	-0.0	-0.7	-0.1	-0.8	-1.3	-0.4	-0.6	-0.9	-0.1	-0.1	-1.0	-1.0	-1.6	-1.0	-0.6	-0.3	-0.0	0.6	0.7	0.5	-0.1	-0.4	-0.3	-0.1

Figure 24. SATOB 101 - 400 hPa mean RMS O-B vector differences (ms-1). AUGUST 2006
All observations
Values are plotted where greater than 10 obs are present



4.6	4.8	5.0	5.2	4.9	4.8	4.9	4.8	5.0	5.2	5.4	4.9	4.8	4.8	4.9	4.8	4.7	4.8	4.7	4.8	4.9	4.7	4.8	4.6	4.9	5.0	5.1	5.1	5.0	5.0	5.1	4.8	4.8	4.9	4.7	4.4
4.8	5.0	5.1	4.9	4.8	4.7	4.4	4.4	4.3	4.4	4.6	4.9	4.4	4.4	4.6	4.7	4.3	4.1	4.0	4.0	4.0	4.0	4.2	4.2	4.3	4.5	4.4	4.4	4.4	4.4	4.4	4.4	4.6	4.6	4.4	4.5
5.3	5.0	4.8	5.0	4.5	4.3	5.0	4.6	4.3	4.8	4.8	4.5	4.5	4.6	4.7	4.8	4.8	4.4	3.8	3.7	3.9	4.6	4.6	5.1	5.2	4.7	5.1	4.5	4.9	4.6	4.5	4.8	5.2	5.4	5.1	5.1
						5.2	5.1	5.3	5.4	5.5	5.7	6.0	5.8	6.5	6.4	6.8	6.1	5.6	5.9	6.3	7.8	8.1	7.4	7.7	7.3	7.8	8.3	8.2							
					5.1	5.5	5.5	5.3	5.3	5.2	5.2	5.6	6.0	5.4	5.2	5.8	6.2	6.8	7.2	8.6	9.0	8.7	7.6	8.4	9.9	10.5	11.2	11.9	8.6	6.9	6.3	6.0	5.8	6.0	5.7
6.0					4.2	5.5	4.6	4.7	4.6	4.6	4.7	4.7	5.4	5.2	5.9	5.4	5.7	6.5	8.5	13.4	11.9	9.6	8.5	7.8	7.2	7.1	7.5	6.8	6.7	5.2	5.2	5.6	5.8	5.5	6.1
5.4						5.4	4.8	4.5	4.4	4.5	4.8	4.6	5.0	6.0	6.2	6.1	7.2	7.1	10.1	10.2	7.9	7.3	6.2	7.3	6.3	5.8	5.7	5.9	5.6	4.8	4.6	5.3	5.8	5.6	6.0
5.7						5.1	4.9	4.9	4.9	5.1	4.9	4.6	4.6	5.0	5.4	6.2	6.9	7.0	7.4	7.6	7.8	8.5	10.3	11.3	10.0	9.6	6.8	6.6	6.8	7.0	4.8	4.9	5.3	5.6	5.8
4.1						5.6	5.7	5.9	5.9	5.5	5.2	5.0	5.0	5.7	6.0	6.7	7.0	7.5	7.6	7.6	8.6	10.5	10.2	10.4	10.4	9.9	7.2	7.4	7.1	7.1	5.8	5.2	4.3	4.2	4.2
4.1						6.8	7.5	10.9	9.5	5.9	5.8	5.5	5.8	6.0	6.2	6.7	7.2	8.6	7.4	7.3	10.1	11.5	8.1	8.3	8.2	7.9	7.7	7.3	7.1	6.7	5.4	4.9	4.8	4.5	4.5
5.6						6.4	10.3	13.9	11.3	8.9	6.4	6.7	6.7	6.3	7.4	7.7	7.9	13.3	13.3	8.4	12.2	13.8	11.2	12.4	12.8	10.4	11.6	11.7	9.9	7.7	4.7	6.1	5.6	6.0	5.9
9.2						6.2	6.2	5.7	6.0	6.1	6.8	8.0	7.2	6.6	7.4	8.3	8.2	11.7	13.9	15.9	14.8	16.1	15.6	17.1	20.4	20.7	22.0	22.8	22.6	17.1	15.3	10.8	10.4	10.0	9.2
8.4					7.3	6.1	5.9	5.4	5.3	5.9	6.4	7.0	8.1	7.9	8.4	7.5	7.2	7.4	10.4	10.5	9.3	11.0	11.6	12.7	13.1	12.3	14.5	15.4	18.7	10.6	8.5	6.2	5.9	6.6	8.3
					8.3	7.7	7.1	5.8	5.1	5.5	6.6	7.2	8.9	9.9	10.2	9.6	9.0	8.2	7.6	8.9	8.4	9.4	10.9	11.9	11.7	11.8	11.0	10.2	8.2	7.4	7.1	6.4	6.1	6.5	7.4
														9.4	9.9	10.1	10.0	9.5	8.8	8.4	10.8	11.5	12.6	11.9	11.8	13.3	13.4	9.1							
5.6	7.4	6.8	6.1	6.7	5.9	5.6	5.0	5.2	5.9	5.0	3.9	4.6	3.9		5.1	5.2	6.2	5.7	5.9	5.6	4.6	6.2	7.6	7.0	5.1	6.0	5.6	5.6	5.9	6.6	5.3	5.6	6.9	4.6	6.1
5.0	5.2	4.9	5.0	5.3	5.8	5.0	5.3	5.3	5.2	5.0	4.7	5.0	4.8	6.2	5.8	6.2	6.0	5.4	5.5	5.3	5.3	5.3	5.5	5.1	5.3	5.0	5.1	5.1	5.2	5.0	5.2	5.4	5.7	5.8	5.8
4.7	4.8	4.6	4.9	4.9	5.2	4.7	4.7	4.6	4.4	4.3	4.9	5.2	4.7	4.5	4.7	5.1	4.6	4.2	4.6	4.1	4.1	4.6	4.7	4.6	4.5	4.5	4.6	4.6	5.0	4.8	4.8	5.2	5.2	4.9	4.7

MONITORING OF SATELLITE TEMPERATURES

MONITORING CENTRE: EXETER

MONTH: Aug 2006

Monitoring procedures

Period :One calendar month.

Data monitored :Reports from NOAA-15, NOAA-16 and NOAA-18.

Standard of comparison :Background field from UKMO global model.

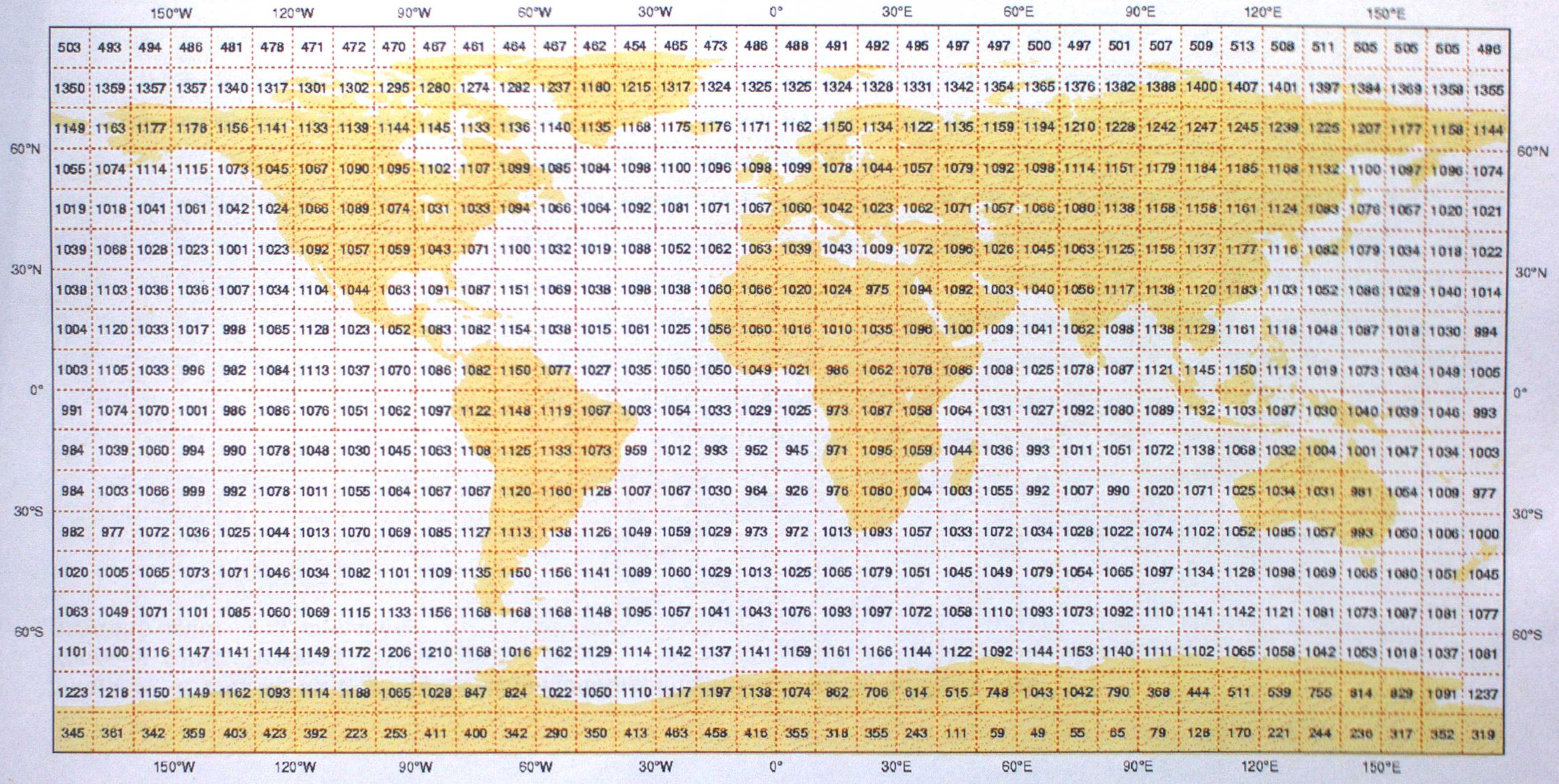
Selection Criteria :All soundings.

Data Extracted :Sounding channels (and approximate weighting function peaks, hPa)

HIRS8 (Surface)
HIRS15 (700)
HIRS11 (500-700)
HIRS4 (400)
AMSUA5 (700)
AMSUA7 (300)
AMSUA9 (100)

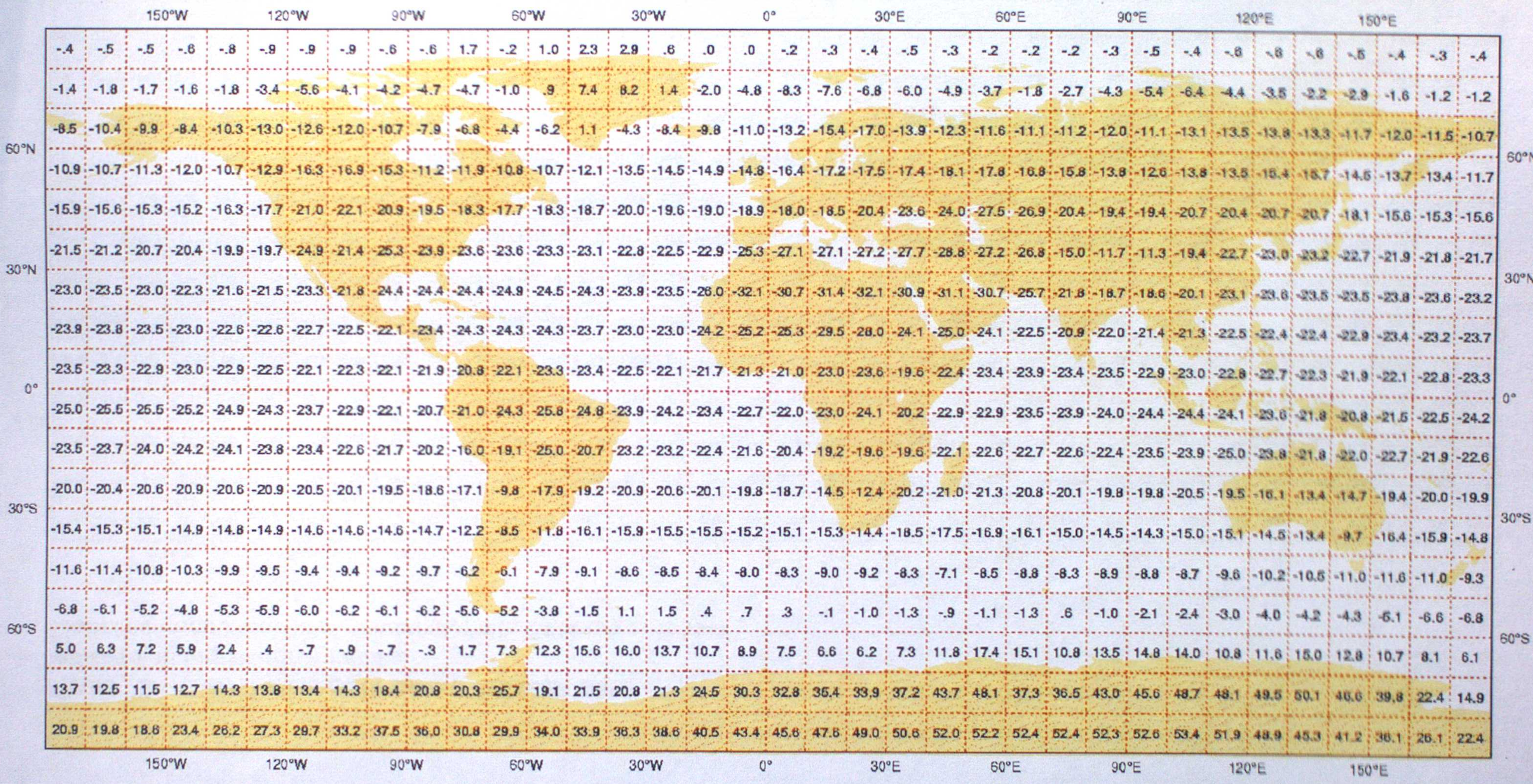
:Mean and standard deviation observation-minus-background brightness temperature differences

Figure 25. ATOVS mean daily count. AUGUST 2006
NOAA15, using all observations
Global average number of observations in 24 hours = 651441



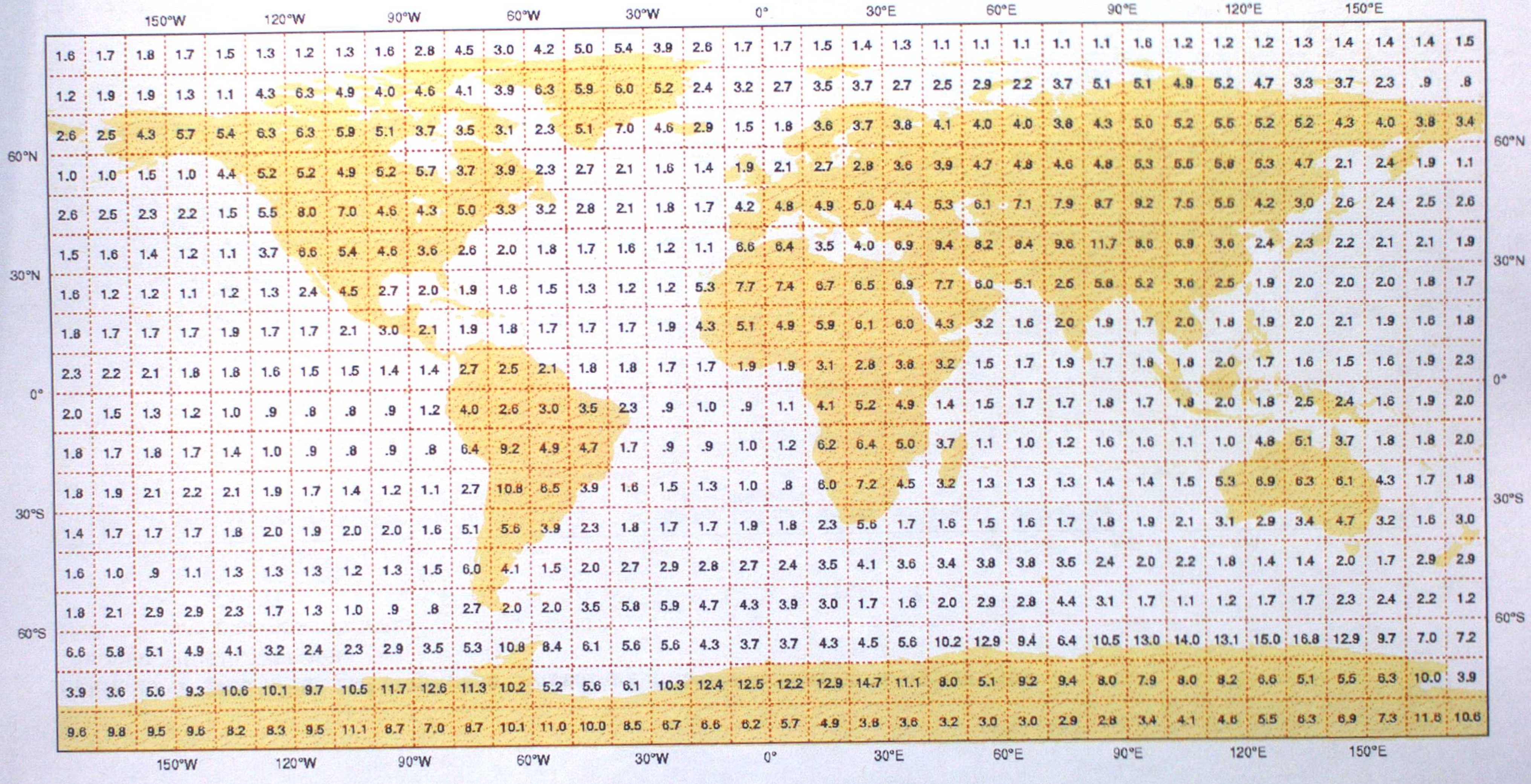
503	493	494	486	481	478	471	472	470	467	461	464	467	462	454	465	473	486	488	491	492	495	497	497	500	497	501	507	509	513	508	511	505	506	505	496
1350	1359	1357	1357	1340	1317	1301	1302	1295	1280	1274	1282	1237	1180	1215	1317	1324	1325	1325	1324	1328	1331	1342	1354	1365	1376	1382	1388	1400	1407	1401	1397	1384	1369	1358	1355
1149	1163	1177	1178	1156	1141	1133	1139	1144	1145	1133	1136	1140	1135	1168	1175	1176	1171	1162	1150	1134	1122	1135	1159	1194	1210	1228	1242	1247	1245	1239	1225	1207	1177	1158	1144
1055	1074	1114	1115	1073	1045	1067	1090	1095	1102	1107	1099	1085	1084	1098	1100	1096	1098	1099	1078	1044	1057	1079	1092	1098	1114	1151	1179	1184	1185	1168	1132	1100	1097	1096	1074
1019	1018	1041	1061	1042	1024	1066	1089	1074	1031	1033	1094	1066	1064	1092	1081	1071	1067	1060	1042	1023	1062	1071	1057	1066	1080	1138	1158	1158	1161	1124	1083	1076	1067	1020	1021
1039	1068	1028	1023	1001	1023	1092	1057	1059	1043	1071	1100	1032	1019	1088	1052	1062	1063	1039	1043	1009	1072	1096	1026	1045	1063	1125	1156	1137	1177	1116	1082	1079	1034	1018	1022
1038	1103	1036	1036	1007	1034	1104	1044	1063	1091	1087	1151	1069	1038	1098	1038	1060	1066	1020	1024	975	1094	1092	1003	1040	1056	1117	1138	1120	1183	1103	1052	1086	1029	1040	1014
1004	1120	1033	1017	998	1065	1128	1023	1052	1083	1082	1154	1038	1015	1061	1025	1056	1060	1016	1010	1035	1096	1100	1009	1041	1062	1098	1138	1129	1161	1118	1048	1087	1018	1030	994
1003	1105	1033	996	982	1084	1113	1037	1070	1086	1082	1150	1077	1027	1035	1050	1050	1049	1021	986	1062	1078	1086	1008	1025	1078	1087	1121	1145	1150	1113	1019	1073	1034	1049	1005
991	1074	1070	1001	986	1086	1076	1051	1062	1097	1122	1148	1119	1067	1003	1054	1033	1029	1025	973	1087	1058	1064	1031	1027	1092	1080	1089	1132	1103	1087	1030	1040	1039	1046	993
984	1039	1060	994	990	1078	1048	1030	1045	1063	1108	1125	1133	1073	959	1012	993	952	945	971	1095	1059	1044	1036	993	1011	1051	1072	1138	1068	1032	1004	1001	1047	1034	1003
984	1003	1066	999	992	1078	1011	1055	1064	1067	1067	1120	1160	1128	1007	1067	1030	964	926	976	1080	1004	1003	1055	992	1007	990	1020	1071	1025	1034	1031	981	1054	1009	977
982	977	1072	1036	1025	1044	1013	1070	1069	1085	1127	1113	1138	1126	1049	1059	1029	973	972	1013	1093	1057	1033	1072	1034	1028	1022	1074	1102	1052	1085	1057	993	1060	1006	1000
1020	1005	1065	1073	1071	1046	1034	1082	1101	1109	1135	1150	1156	1141	1089	1060	1029	1013	1025	1065	1079	1051	1045	1049	1079	1054	1065	1097	1134	1128	1098	1069	1065	1080	1051	1045
1063	1049	1071	1101	1085	1060	1069	1115	1133	1156	1168	1168	1168	1148	1095	1057	1041	1043	1076	1093	1097	1072	1058	1110	1093	1073	1092	1110	1141	1142	1121	1081	1073	1087	1081	1077
1101	1100	1116	1147	1141	1144	1149	1172	1206	1210	1168	1016	1162	1129	1114	1142	1137	1141	1159	1161	1166	1144	1122	1092	1144	1153	1140	1111	1102	1065	1058	1042	1053	1018	1037	1081
1223	1218	1150	1149	1162	1093	1114	1188	1065	1028	847	824	1022	1050	1110	1117	1197	1138	1074	862	706	614	515	748	1043	1042	790	368	444	511	539	755	814	829	1091	1237
345	361	342	359	403	423	392	223	253	411	400	342	290	350	413	463	458	416	355	318	355	243	111	59	49	55	65	79	128	170	221	244	236	317	352	319

Figure 26. ATOVS MEAN O-B brightness temperature differences (deg C). AUGUST 2006
Channel: HIRS8 (Surface)
NOAA15, using all observations



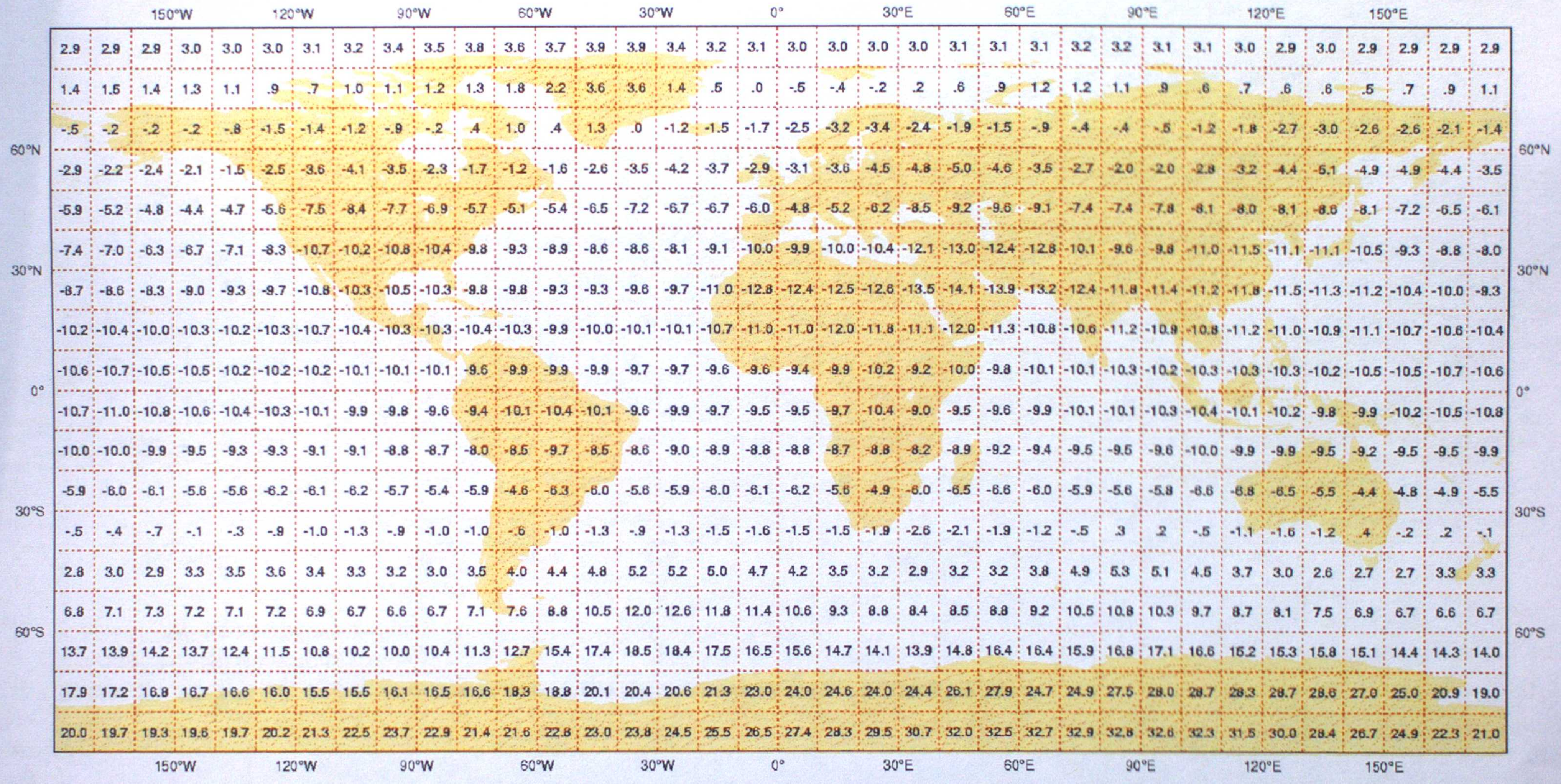
-.4	-.5	-.5	-.6	-.8	-.9	-.9	-.9	-.6	-.6	1.7	-.2	1.0	2.3	2.9	.6	.0	.0	-.2	-.3	-.4	-.5	-.3	-.2	-.2	-.2	-.3	-.5	-.4	-.6	-.8	-.6	-.5	-.4	-.3	-.4
-1.4	-1.8	-1.7	-1.6	-1.8	-3.4	-5.6	-4.1	-4.2	-4.7	-4.7	-1.0	.9	7.4	8.2	1.4	-2.0	-4.8	-8.3	-7.6	-6.8	-6.0	-4.9	-3.7	-1.8	-2.7	-4.3	-5.4	-6.4	-4.4	-3.5	-2.2	-2.9	-1.6	-1.2	-1.2
-8.5	-10.4	-9.9	-8.4	-10.3	-13.0	-12.6	-12.0	-10.7	-7.9	-6.8	-4.4	-6.2	1.1	-4.3	-8.4	-9.8	-11.0	-13.2	-15.4	-17.0	-13.9	-12.3	-11.6	-11.1	-11.2	-12.0	-11.1	-13.1	-13.5	-13.8	-13.3	-11.7	-12.0	-11.5	-10.7
-10.9	-10.7	-11.3	-12.0	-10.7	-12.9	-16.3	-16.9	-15.3	-11.2	-11.9	-10.8	-10.7	-12.1	-13.5	-14.5	-14.9	-14.8	-16.4	-17.2	-17.5	-17.4	-18.1	-17.8	-16.8	-15.8	-13.8	-12.6	-13.8	-13.5	-15.4	-15.7	-14.6	-13.7	-13.4	-11.7
-15.9	-15.6	-15.3	-15.2	-16.3	-17.7	-21.0	-22.1	-20.9	-19.5	-18.3	-17.7	-18.3	-18.7	-20.0	-19.6	-19.0	-18.9	-18.0	-18.5	-20.4	-23.6	-24.0	-27.5	-26.9	-20.4	-19.4	-19.4	-20.7	-20.4	-20.7	-20.7	-18.1	-15.6	-15.3	-15.6
-21.5	-21.2	-20.7	-20.4	-19.9	-19.7	-24.9	-21.4	-25.3	-23.9	-23.6	-23.6	-23.3	-23.1	-22.8	-22.5	-22.9	-25.3	-27.1	-27.1	-27.2	-27.7	-28.8	-27.2	-26.8	-15.0	-11.7	-11.3	-19.4	-22.7	-23.0	-23.2	-22.7	-21.9	-21.8	-21.7
-23.0	-23.5	-23.0	-22.3	-21.6	-21.5	-23.3	-21.8	-24.4	-24.4	-24.4	-24.9	-24.5	-24.3	-23.9	-23.5	-26.0	-32.1	-30.7	-31.4	-32.1	-30.9	-31.1	-30.7	-25.7	-21.8	-18.7	-18.6	-20.1	-23.1	-23.6	-23.5	-23.5	-23.8	-23.6	-23.2
-23.9	-23.8	-23.5	-23.0	-22.6	-22.6	-22.7	-22.5	-22.1	-23.4	-24.3	-24.3	-24.3	-23.7	-23.0	-23.0	-24.2	-25.2	-25.3	-29.5	-28.0	-24.1	-25.0	-24.1	-22.5	-20.9	-22.0	-21.4	-21.3	-22.5	-22.4	-22.4	-22.9	-23.4	-23.2	-23.7
-23.5	-23.3	-22.9	-23.0	-22.9	-22.5	-22.1	-22.3	-22.1	-21.9	-20.8	-22.1	-23.3	-23.4	-22.5	-22.1	-21.7	-21.3	-21.0	-23.0	-23.6	-19.6	-22.4	-23.4	-23.9	-23.4	-23.5	-22.9	-23.0	-22.8	-22.7	-22.3	-21.9	-22.1	-22.8	-23.3
-25.0	-25.5	-25.5	-25.2	-24.9	-24.3	-23.7	-22.9	-22.1	-20.7	-21.0	-24.3	-25.8	-24.8	-23.9	-24.2	-23.4	-22.7	-22.0	-23.0	-24.1	-20.2	-22.9	-22.9	-23.5	-23.9	-24.0	-24.4	-24.4	-24.1	-23.6	-21.8	-20.8	-21.5	-22.5	-24.2
-23.5	-23.7	-24.0	-24.2	-24.1	-23.8	-23.4	-22.6	-21.7	-20.2	-16.0	-19.1	-25.0	-20.7	-23.2	-23.2	-22.4	-21.6	-20.4	-19.2	-19.6	-19.6	-22.1	-22.6	-22.7	-22.6	-22.4	-23.5	-23.9	-25.0	-23.8	-21.8	-22.0	-22.7	-21.9	-22.6
-20.0	-20.4	-20.6	-20.9	-20.6	-20.9	-20.5	-20.1	-19.5	-18.6	-17.1	-9.8	-17.9	-19.2	-20.9	-20.6	-20.1	-19.8	-18.7	-14.5	-12.4	-20.2	-21.0	-21.3	-20.8	-20.1	-19.8	-19.8	-20.5	-19.5	-16.1	-13.4	-14.7	-19.4	-20.0	-19.9
-15.4	-15.3	-15.1	-14.9	-14.8	-14.9	-14.6	-14.6	-14.6	-14.7	-12.2	-8.5	-11.8	-16.1	-15.9	-15.5	-15.5	-15.2	-15.1	-15.3	-14.4	-18.5	-17.5	-16.9	-16.1	-15.0	-14.5	-14.3	-15.0	-15.1	-14.5	-13.4	-9.7	-16.4	-15.9	-14.8
-11.6	-11.4	-10.8	-10.3	-9.9	-9.5	-9.4	-9.4	-9.2	-9.7	-6.2	-6.1	-7.9	-9.1	-8.6	-8.5	-8.4	-8.0	-8.3	-9.0	-9.2	-8.3	-7.1	-8.5	-8.8	-8.3	-8.9	-8.8	-8.7	-9.6	-10.2	-10.5	-11.0	-11.6	-11.0	-9.3
-6.8	-6.1	-5.2	-4.8	-5.3	-5.9	-6.0	-6.2	-6.1	-6.2	-5.6	-5.2	-3.8	-1.5	1.1	1.5	.4	.7	.3	-.1	-1.0	-1.3	-.9	-1.1	-1.3	.6	-1.0	-2.1	-2.4	-3.0	-4.0	-4.2	-4.3	-6.1	-6.6	-6.8
5.0	6.3	7.2	5.9	2.4	.4	-.7	-.9	-.7	-.3	1.7	7.3	12.3	15.6	16.0	13.7	10.7	8.9	7.5	6.6	6.2	7.3	11.8	17.4	15.1	10.8	13.5	14.8	14.0	10.8	11.6	15.0	12.8	10.7	8.1	6.1
13.7	12.5	11.5	12.7	14.3	13.8	13.4	14.3	18.4	20.8	20.3	25.7	19.1	21.5	20.8	21.3	24.5	30.3	32.8	35.4	33.9	37.2	43.7	48.1	37.3	36.5	43.0	45.6	48.7	48.1	49.5	50.1	46.6	39.8	22.4	14.9
20.9	19.8	18.6	23.4	26.2	27.3	29.7	33.2	37.5	36.0	30.8	29.9	34.0	33.9	36.3	38.6	40.5	43.4	45.6	47.6	49.0	50.6	52.0	52.2	52.4	52.4	52.3	52.6	53.4	51.9	48.9	45.3	41.2	36.1	26.1	22.4

Figure 27. ATOVS SD O-B brightness temperature differences (deg C). AUGUST 2006
Channel: HIRS8 (Surface)
NOAA15, using all observations



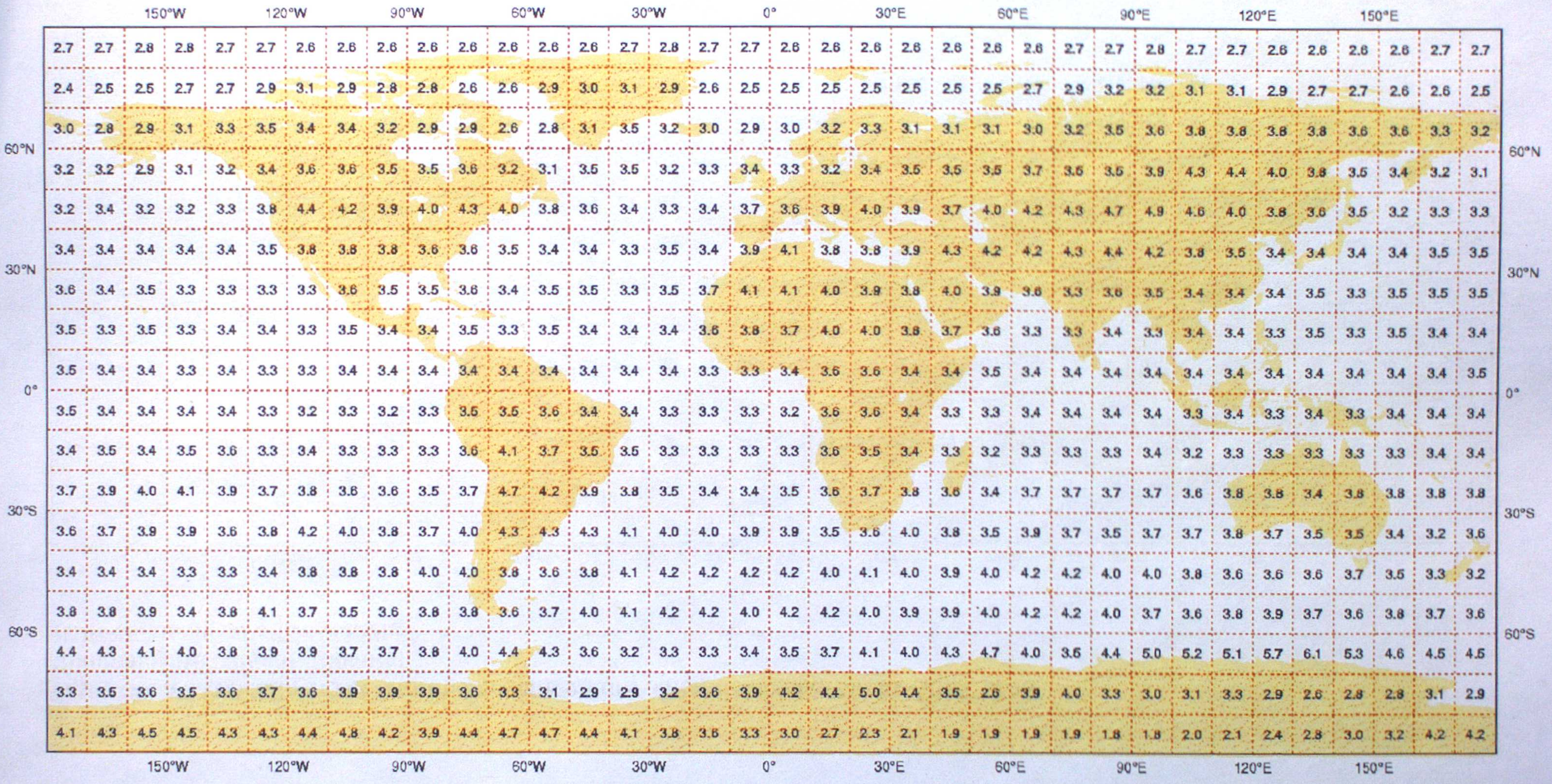
1.6	1.7	1.8	1.7	1.5	1.3	1.2	1.3	1.6	2.8	4.5	3.0	4.2	5.0	5.4	3.9	2.6	1.7	1.7	1.5	1.4	1.3	1.1	1.1	1.1	1.1	1.1	1.6	1.2	1.2	1.2	1.3	1.4	1.4	1.4	1.5
1.2	1.9	1.9	1.3	1.1	4.3	6.3	4.9	4.0	4.6	4.1	3.9	6.3	5.9	6.0	5.2	2.4	3.2	2.7	3.5	3.7	2.7	2.5	2.9	2.2	3.7	5.1	5.1	4.9	5.2	4.7	3.3	3.7	2.3	.9	.8
2.6	2.5	4.3	5.7	5.4	6.3	6.3	5.9	5.1	3.7	3.5	3.1	2.3	5.1	7.0	4.6	2.9	1.5	1.8	3.6	3.7	3.8	4.1	4.0	4.0	3.8	4.3	5.0	5.2	5.5	5.2	5.2	4.3	4.0	3.8	3.4
1.0	1.0	1.5	1.0	4.4	5.2	5.2	4.9	5.2	5.7	3.7	3.9	2.3	2.7	2.1	1.6	1.4	1.9	2.1	2.7	2.8	3.6	3.9	4.7	4.8	4.6	4.8	5.3	5.5	5.8	5.3	4.7	2.1	2.4	1.9	1.1
2.6	2.5	2.3	2.2	1.5	5.5	8.0	7.0	4.6	4.3	5.0	3.3	3.2	2.8	2.1	1.8	1.7	4.2	4.8	4.9	5.0	4.4	5.3	6.1	7.1	7.9	8.7	9.2	7.5	5.5	4.2	3.0	2.6	2.4	2.5	2.6
1.5	1.6	1.4	1.2	1.1	3.7	6.6	5.4	4.6	3.6	2.6	2.0	1.8	1.7	1.6	1.2	1.1	6.6	6.4	3.5	4.0	6.9	9.4	8.2	8.4	9.6	11.7	8.6	6.9	3.6	2.4	2.3	2.2	2.1	2.1	1.9
1.6	1.2	1.2	1.1	1.2	1.3	2.4	4.5	2.7	2.0	1.9	1.6	1.5	1.3	1.2	1.2	5.3	7.7	7.4	6.7	6.5	6.9	7.7	6.0	5.1	2.5	5.8	5.2	3.6	2.5	1.9	2.0	2.0	2.0	1.8	1.7
1.8	1.7	1.7	1.7	1.9	1.7	1.7	2.1	3.0	2.1	1.9	1.8	1.7	1.7	1.7	1.9	4.3	5.1	4.9	5.9	6.1	6.0	4.3	3.2	1.6	2.0	1.9	1.7	2.0	1.8	1.9	2.0	2.1	1.9	1.6	1.8
2.3	2.2	2.1	1.8	1.8	1.6	1.5	1.5	1.4	1.4	2.7	2.5	2.1	1.8	1.8	1.7	1.7	1.9	1.9	3.1	2.8	3.8	3.2	1.5	1.7	1.9	1.7	1.8	1.8	2.0	1.7	1.6	1.5	1.6	1.9	2.3
2.0	1.5	1.3	1.2	1.0	.9	.8	.8	.9	1.2	4.0	2.6	3.0	3.5	2.3	.9	1.0	.9	1.1	4.1	5.2	4.9	1.4	1.5	1.7	1.7	1.8	1.7	1.8	2.0	1.8	2.5	2.4	1.6	1.9	2.0
1.8	1.7	1.8	1.7	1.4	1.0	.9	.8	.9	.8	6.4	9.2	4.9	4.7	1.7	.9	.9	1.0	1.2	6.2	6.4	5.0	3.7	1.1	1.0	1.2	1.6	1.6	1.1	1.0	4.8	5.1	3.7	1.8	1.8	2.0
1.8	1.9	2.1	2.2	2.1	1.9	1.7	1.4	1.2	1.1	2.7	10.8	6.5	3.9	1.6	1.5	1.3	1.0	.8	6.0	7.2	4.5	3.2	1.3	1.3	1.3	1.4	1.4	1.5	5.3	6.9	6.3	6.1	4.3	1.7	1.8
1.4	1.7	1.7	1.7	1.8	2.0	1.9	2.0	2.0	1.6	5.1	5.6	3.9	2.3	1.8	1.7	1.7	1.9	1.8	2.3	5.6	1.7	1.6	1.5	1.6	1.7	1.8	1.9	2.1	3.1	2.9	3.4	4.7	3.2	1.6	3.0
1.6	1.0	.9	1.1	1.3	1.3	1.3	1.2	1.3	1.5	6.0	4.1	1.5	2.0	2.7	2.9	2.8	2.7	2.4	3.5	4.1	3.6	3.4	3.8	3.8	3.5	2.4	2.0	2.2	1.8	1.4	1.4	2.0	1.7	2.9	2.9
1.8	2.1	2.9	2.9	2.3	1.7	1.3	1.0	.9	.8	2.7	2.0	2.0	3.5	5.8	5.9	4.7	4.3	3.9	3.0	1.7	1.6	2.0	2.9	2.8	4.4	3.1	1.7	1.1	1.2	1.7	1.7	2.3	2.4	2.2	1.2
6.6	5.8	5.1	4.9	4.1	3.2	2.4	2.3	2.9	3.5	5.3	10.8	8.4	6.1	5.6	5.6	4.3	3.7	3.7	4.3	4.5	5.6	10.2	12.9	9.4	6.4	10.5	13.0	14.0	13.1	15.0	16.8	12.9	9.7	7.0	7.2
3.9	3.6	5.6	9.3	10.6	10.1	9.7	10.5	11.7	12.6	11.3	10.2	5.2	5.6	6.1	10.3	12.4	12.5	12.2	12.9	14.7	11.1	8.0	5.1	9.2	9.4	8.0	7.9	8.0	8.2	6.6	5.1	5.5	6.3	10.0	3.9
9.6	9.8	9.5	9.6	8.2	8.3	9.5	11.1	8.7	7.0	8.7	10.1	11.0	10.0	8.5	6.7	6.6	6.2	5.7	4.9	3.8	3.6	3.2	3.0	3.0	2.9	2.8	3.4	4.1	4.6	5.5	6.3	6.9	7.3	11.8	10.6

Figure 28. ATOVS MEAN O-B brightness temperature differences (deg C). AUGUST 2006
Channel: HIRS15 (700 hPa)
NOAA15, using all observations



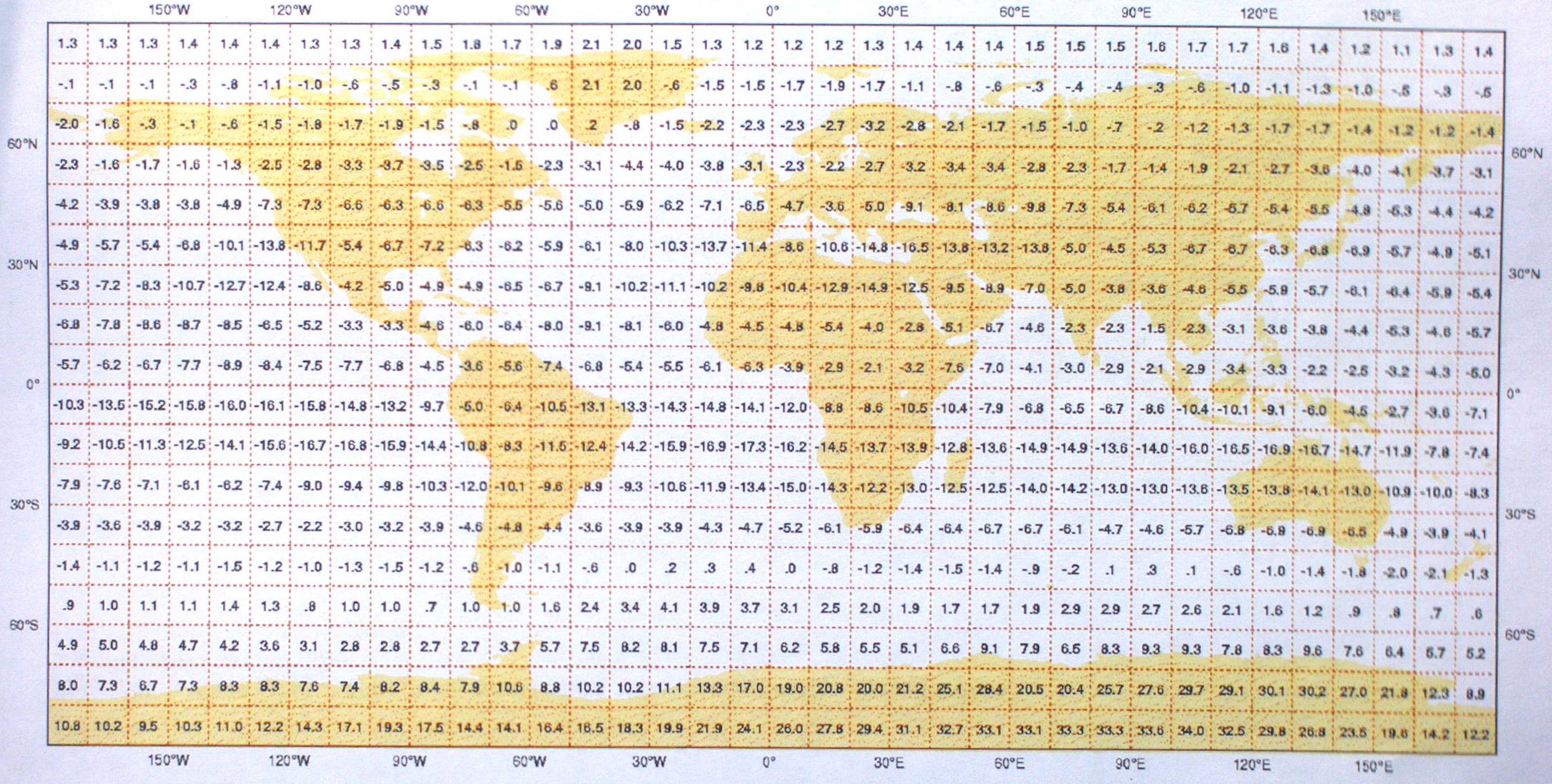
2.9	2.9	2.9	3.0	3.0	3.0	3.1	3.2	3.4	3.5	3.8	3.6	3.7	3.9	3.9	3.4	3.2	3.1	3.0	3.0	3.0	3.0	3.1	3.1	3.1	3.2	3.2	3.1	3.1	3.0	2.9	3.0	2.9	2.9	2.9	2.9
1.4	1.5	1.4	1.3	1.1	.9	.7	1.0	1.1	1.2	1.3	1.8	2.2	3.6	3.6	1.4	.5	.0	-.5	-.4	-.2	.2	.6	.9	1.2	1.2	1.1	.9	.6	.7	.6	.6	.5	.7	.9	1.1
-.5	-.2	-.2	-.2	-.8	-1.5	-1.4	-1.2	-.9	-.2	.4	1.0	.4	1.3	.0	-1.2	-1.5	-1.7	-2.5	-3.2	-3.4	-2.4	-1.9	-1.5	-.9	-.4	-.4	-.5	-1.2	-1.8	-2.7	-3.0	-2.6	-2.6	-2.1	-1.4
-2.9	-2.2	-2.4	-2.1	-1.5	-2.5	-3.6	-4.1	-3.5	-2.3	-1.7	-1.2	-1.6	-2.6	-3.5	-4.2	-3.7	-2.9	-3.1	-3.6	-4.5	-4.8	-5.0	-4.6	-3.5	-2.7	-2.0	-2.0	-2.8	-3.2	-4.4	-5.1	-4.9	-4.9	-4.4	-3.5
-5.9	-5.2	-4.8	-4.4	-4.7	-5.6	-7.5	-8.4	-7.7	-6.9	-5.7	-5.1	-5.4	-6.5	-7.2	-6.7	-6.7	-6.0	-4.8	-5.2	-6.2	-8.5	-9.2	-9.6	-9.1	-7.4	-7.4	-7.8	-8.1	-8.0	-8.1	-8.6	-8.1	-7.2	-6.5	-6.1
-7.4	-7.0	-6.3	-6.7	-7.1	-8.3	-10.7	-10.2	-10.8	-10.4	-9.8	-9.3	-8.9	-8.6	-8.6	-8.1	-9.1	-10.0	-9.9	-10.0	-10.4	-12.1	-13.0	-12.4	-12.8	-10.1	-9.6	-9.8	-11.0	-11.5	-11.1	-11.1	-10.5	-9.3	-8.8	-8.0
-8.7	-8.6	-8.3	-9.0	-9.3	-9.7	-10.8	-10.3	-10.5	-10.3	-9.8	-9.8	-9.3	-9.3	-9.6	-9.7	-11.0	-12.8	-12.4	-12.5	-12.6	-13.5	-14.1	-13.9	-13.2	-12.4	-11.8	-11.4	-11.2	-11.8	-11.5	-11.3	-11.2	-10.4	-10.0	-9.3
-10.2	-10.4	-10.0	-10.3	-10.2	-10.3	-10.7	-10.4	-10.3	-10.3	-10.4	-10.3	-9.9	-10.0	-10.1	-10.1	-10.7	-11.0	-11.0	-12.0	-11.8	-11.1	-12.0	-11.3	-10.8	-10.6	-11.2	-10.9	-10.8	-11.2	-11.0	-10.9	-11.1	-10.7	-10.6	-10.4
-10.6	-10.7	-10.5	-10.5	-10.2	-10.2	-10.2	-10.1	-10.1	-10.1	-9.6	-9.9	-9.9	-9.9	-9.7	-9.7	-9.6	-9.6	-9.4	-9.9	-10.2	-9.2	-10.0	-9.8	-10.1	-10.1	-10.3	-10.2	-10.3	-10.3	-10.3	-10.2	-10.5	-10.5	-10.7	-10.6
-10.7	-11.0	-10.8	-10.6	-10.4	-10.3	-10.1	-9.9	-9.8	-9.6	-9.4	-10.1	-10.4	-10.1	-9.6	-9.9	-9.7	-9.5	-9.5	-9.7	-10.4	-9.0	-9.5	-9.6	-9.9	-10.1	-10.1	-10.3	-10.4	-10.1	-10.2	-9.8	-9.9	-10.2	-10.5	-10.8
-10.0	-10.0	-9.9	-9.5	-9.3	-9.3	-9.1	-9.1	-8.8	-8.7	-8.0	-8.5	-9.7	-8.5	-8.6	-9.0	-8.9	-8.8	-8.8	-8.7	-8.8	-8.2	-8.9	-9.2	-9.4	-9.5	-9.5	-9.6	-10.0	-9.9	-9.9	-9.5	-9.2	-9.5	-9.5	-9.9
-5.9	-6.0	-6.1	-5.6	-5.6	-6.2	-6.1	-6.2	-5.7	-5.4	-5.9	-4.6	-6.3	-6.0	-5.6	-5.9	-6.0	-6.1	-6.2	-5.6	-4.9	-6.0	-6.5	-6.6	-6.0	-5.9	-5.6	-5.8	-6.6	-6.8	-6.5	-5.5	-4.4	-4.8	-4.9	-5.5
-.5	-.4	-.7	-.1	-.3	-.9	-1.0	-1.3	-.9	-1.0	-1.0	-.6	-1.0	-1.3	-.9	-1.3	-1.5	-1.6	-1.5	-1.5	-1.9	-2.6	-2.1	-1.9	-1.2	-.5	.3	.2	-.5	-1.1	-1.6	-1.2	.4	-.2	.2	-.1
2.8	3.0	2.9	3.3	3.5	3.6	3.4	3.3	3.2	3.0	3.5	4.0	4.4	4.8	5.2	5.2	5.0	4.7	4.2	3.5	3.2	2.9	3.2	3.2	3.8	4.9	5.3	5.1	4.5	3.7	3.0	2.6	2.7	2.7	3.3	3.3
6.8	7.1	7.3	7.2	7.1	7.2	6.9	6.7	6.6	6.7	7.1	7.6	8.8	10.5	12.0	12.6	11.8	11.4	10.6	9.3	8.8	8.4	8.5	8.8	9.2	10.5	10.8	10.3	9.7	8.7	8.1	7.5	6.9	6.7	6.6	6.7
13.7	13.9	14.2	13.7	12.4	11.5	10.8	10.2	10.0	10.4	11.3	12.7	15.4	17.4	18.5	18.4	17.5	16.5	15.6	14.7	14.1	13.9	14.8	16.4	16.4	15.9	16.8	17.1	16.6	15.2	15.3	15.8	15.1	14.4	14.3	14.0
17.9	17.2	16.8	16.7	16.6	16.0	15.5	15.5	16.1	16.5	16.6	18.3	18.8	20.1	20.4	20.6	21.3	23.0	24.0	24.6	24.0	24.4	26.1	27.9	24.7	24.9	27.5	28.0	28.7	28.3	28.7	28.6	27.0	25.0	20.9	19.0
20.0	19.7	19.3	19.6	19.7	20.2	21.3	22.5	23.7	22.9	21.4	21.6	22.8	23.0	23.8	24.5	25.5	26.5	27.4	28.3	29.5	30.7	32.0	32.5	32.7	32.9	32.8	32.6	32.3	31.5	30.0	28.4	26.7	24.9	22.3	21.0

Figure 29. ATOVS SD O-B brightness temperature differences (deg C). AUGUST 2006
Channel: HIRS15 (700 hPa)
NOAA15, using all observations



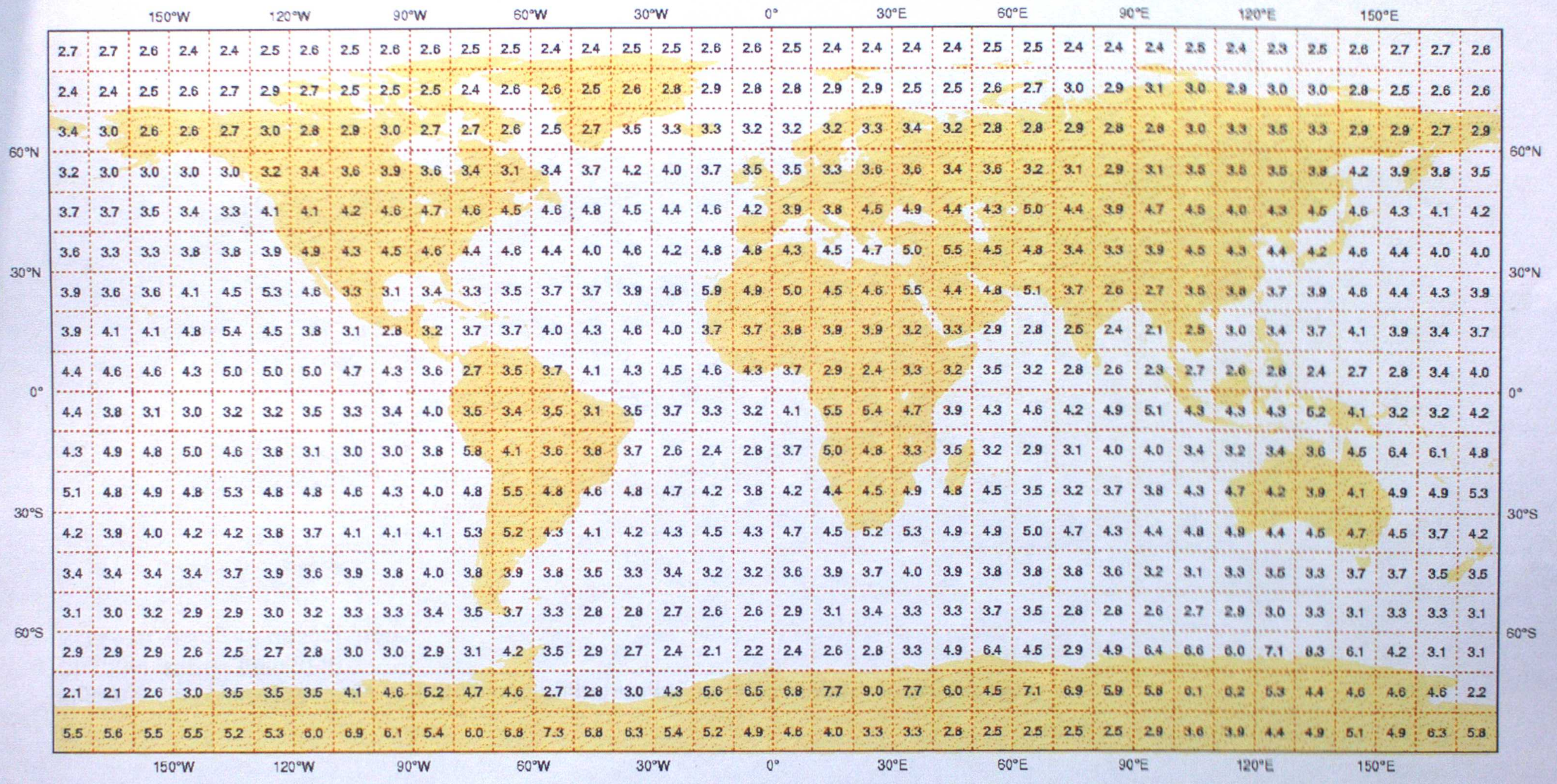
2.7	2.7	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.7	2.8	2.7	2.7	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.7	2.7	2.8	2.7	2.7	2.6	2.6	2.6	2.6	2.7	2.7
2.4	2.5	2.5	2.7	2.7	2.9	3.1	2.9	2.8	2.8	2.6	2.6	2.9	3.0	3.1	2.9	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.7	2.9	3.2	3.2	3.1	3.1	2.9	2.7	2.7	2.6	2.6	2.5
3.0	2.8	2.9	3.1	3.3	3.5	3.4	3.4	3.2	2.9	2.9	2.6	2.8	3.1	3.5	3.2	3.0	2.9	3.0	3.2	3.3	3.1	3.1	3.1	3.0	3.2	3.5	3.6	3.8	3.8	3.8	3.8	3.6	3.6	3.3	3.2
3.2	3.2	2.9	3.1	3.2	3.4	3.6	3.6	3.5	3.5	3.6	3.2	3.1	3.5	3.5	3.2	3.3	3.4	3.3	3.2	3.4	3.5	3.5	3.5	3.7	3.6	3.5	3.9	4.3	4.4	4.0	3.8	3.5	3.4	3.2	3.1
3.2	3.4	3.2	3.2	3.3	3.8	4.4	4.2	3.9	4.0	4.3	4.0	3.8	3.6	3.4	3.3	3.4	3.7	3.6	3.9	4.0	3.9	3.7	4.0	4.2	4.3	4.7	4.9	4.6	4.0	3.8	3.6	3.5	3.2	3.3	3.3
3.4	3.4	3.4	3.4	3.4	3.5	3.8	3.8	3.8	3.6	3.6	3.5	3.4	3.4	3.3	3.5	3.4	3.9	4.1	3.8	3.8	3.9	4.3	4.2	4.2	4.3	4.4	4.2	3.8	3.5	3.4	3.4	3.4	3.4	3.5	3.5
3.6	3.4	3.5	3.3	3.3	3.3	3.3	3.6	3.5	3.5	3.6	3.4	3.5	3.5	3.3	3.5	3.7	4.1	4.1	4.0	3.9	3.8	4.0	3.9	3.6	3.3	3.6	3.5	3.4	3.4	3.4	3.5	3.3	3.5	3.5	3.5
3.5	3.3	3.5	3.3	3.4	3.4	3.3	3.5	3.4	3.4	3.5	3.3	3.5	3.4	3.4	3.4	3.6	3.8	3.7	4.0	4.0	3.8	3.7	3.6	3.3	3.3	3.4	3.3	3.4	3.4	3.3	3.5	3.3	3.5	3.4	3.4
3.5	3.4	3.4	3.3	3.4	3.3	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.3	3.4	3.6	3.6	3.4	3.4	3.5	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.5
3.5	3.4	3.4	3.4	3.4	3.3	3.2	3.3	3.2	3.3	3.5	3.5	3.6	3.4	3.4	3.3	3.3	3.3	3.2	3.6	3.6	3.4	3.3	3.3	3.4	3.4	3.4	3.4	3.3	3.4	3.3	3.4	3.3	3.4	3.4	3.4
3.4	3.5	3.4	3.5	3.6	3.3	3.4	3.3	3.3	3.3	3.6	4.1	3.7	3.5	3.5	3.3	3.3	3.3	3.3	3.6	3.5	3.4	3.3	3.2	3.3	3.3	3.3	3.4	3.2	3.3	3.3	3.3	3.3	3.3	3.4	3.4
3.7	3.9	4.0	4.1	3.9	3.7	3.8	3.6	3.6	3.5	3.7	4.7	4.2	3.9	3.8	3.5	3.4	3.4	3.5	3.6	3.7	3.8	3.6	3.4	3.7	3.7	3.7	3.7	3.6	3.8	3.8	3.4	3.8	3.8	3.8	3.8
3.6	3.7	3.9	3.9	3.6	3.8	4.2	4.0	3.8	3.7	4.0	4.3	4.3	4.3	4.1	4.0	4.0	3.9	3.9	3.5	3.6	4.0	3.8	3.5	3.9	3.7	3.5	3.7	3.7	3.8	3.7	3.5	3.5	3.4	3.2	3.6
3.4	3.4	3.4	3.3	3.3	3.4	3.8	3.8	3.8	4.0	4.0	3.8	3.6	3.8	4.1	4.2	4.2	4.2	4.2	4.0	4.1	4.0	3.9	4.0	4.2	4.2	4.0	4.0	3.8	3.6	3.6	3.6	3.7	3.5	3.3	3.2
3.8	3.8	3.9	3.4	3.8	4.1	3.7	3.5	3.6	3.8	3.8	3.6	3.7	4.0	4.1	4.2	4.2	4.0	4.2	4.2	4.0	3.9	3.9	4.0	4.2	4.2	4.0	3.7	3.6	3.8	3.9	3.7	3.6	3.8	3.7	3.6
4.4	4.3	4.1	4.0	3.8	3.9	3.9	3.7	3.7	3.8	4.0	4.4	4.3	3.6	3.2	3.3	3.3	3.4	3.5	3.7	4.1	4.0	4.3	4.7	4.0	3.6	4.4	5.0	5.2	5.1	5.7	6.1	5.3	4.6	4.5	4.5
3.3	3.5	3.6	3.5	3.6	3.7	3.6	3.9	3.9	3.9	3.6	3.3	3.1	2.9	2.9	3.2	3.6	3.9	4.2	4.4	5.0	4.4	3.5	2.6	3.9	4.0	3.3	3.0	3.1	3.3	2.9	2.6	2.8	2.8	3.1	2.9
4.1	4.3	4.5	4.5	4.3	4.3	4.4	4.8	4.2	3.9	4.4	4.7	4.7	4.4	4.1	3.8	3.6	3.3	3.0	2.7	2.3	2.1	1.9	1.9	1.9	1.9	1.8	1.8	2.0	2.1	2.4	2.8	3.0	3.2	4.2	4.2

Figure 30. ATOVS MEAN O-B brightness temperature differences (deg C). AUGUST 2006
Channel: HIRS11 (500 - 700 hPa)
NOAA15, using all observations



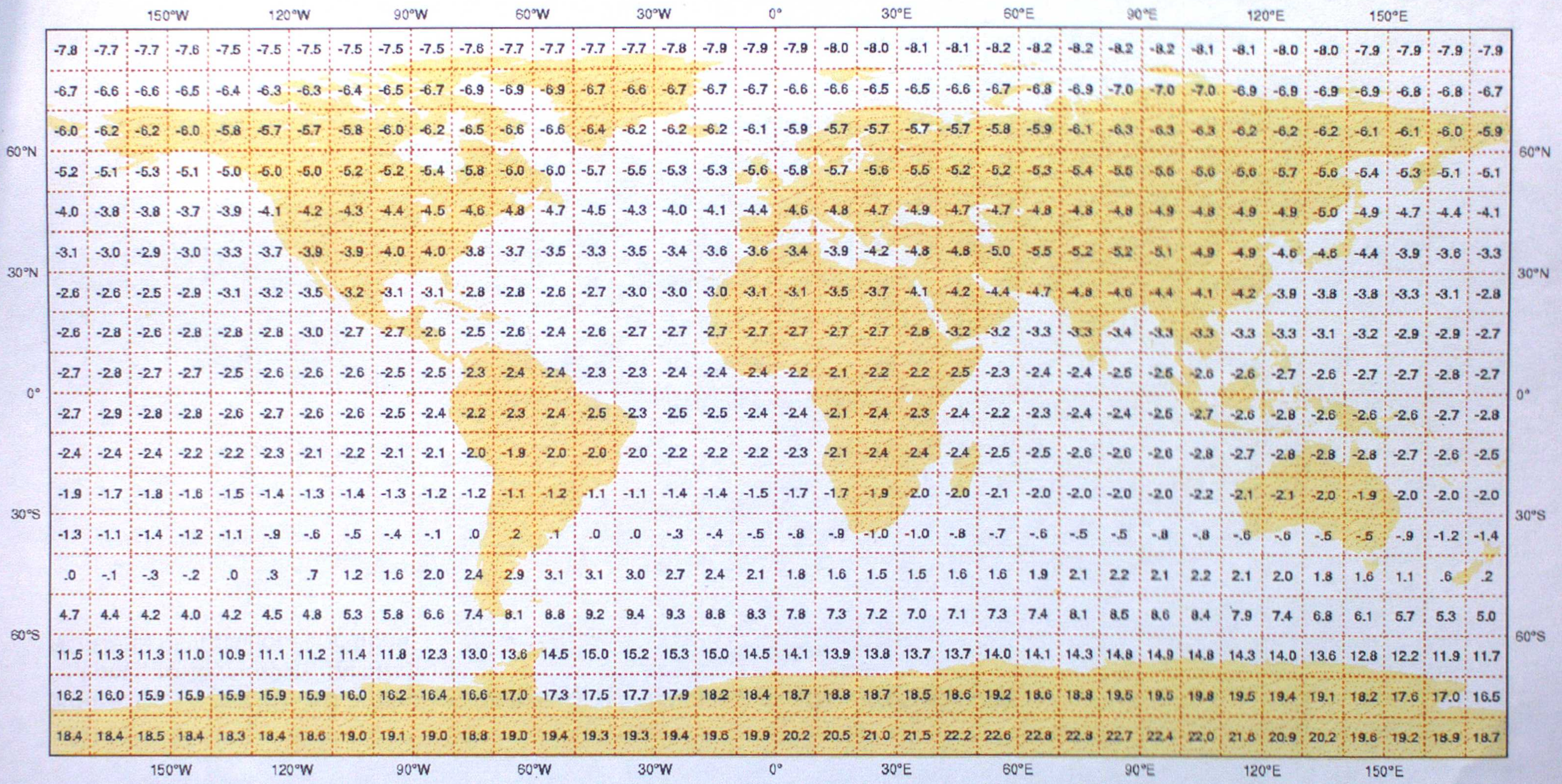
1.3	1.3	1.3	1.4	1.4	1.4	1.3	1.3	1.4	1.5	1.8	1.7	1.9	2.1	2.0	1.5	1.3	1.2	1.2	1.2	1.3	1.4	1.4	1.4	1.5	1.5	1.5	1.6	1.7	1.7	1.6	1.4	1.2	1.1	1.3	1.4
-.1	-.1	-.1	-.3	-.8	-1.1	-1.0	-.6	-.5	-.3	-.1	-.1	.6	2.1	2.0	-.6	-1.5	-1.5	-1.7	-1.9	-1.7	-1.1	-.8	-.6	-.3	-.4	-.4	-.3	-.6	-1.0	-1.1	-1.3	-1.0	-.5	-.3	-.5
-2.0	-1.6	-.3	-.1	-.6	-1.5	-1.8	-1.7	-1.9	-1.5	-.8	.0	.0	.2	-.8	-1.5	-2.2	-2.3	-2.3	-2.7	-3.2	-2.8	-2.1	-1.7	-1.5	-1.0	-.7	-.2	-1.2	-1.3	-1.7	-1.7	-1.4	-1.2	-1.2	-1.4
-2.3	-1.6	-1.7	-1.6	-1.3	-2.5	-2.8	-3.3	-3.7	-3.5	-2.5	-1.5	-2.3	-3.1	-4.4	-4.0	-3.8	-3.1	-2.3	-2.2	-2.7	-3.2	-3.4	-3.4	-2.8	-2.3	-1.7	-1.4	-1.9	-2.1	-2.7	-3.6	-4.0	-4.1	-3.7	-3.1
-4.2	-3.9	-3.8	-3.8	-4.9	-7.3	-7.3	-6.6	-6.3	-6.6	-6.3	-5.5	-5.6	-5.0	-5.9	-6.2	-7.1	-6.5	-4.7	-3.6	-5.0	-9.1	-8.1	-8.6	-9.8	-7.3	-5.4	-6.1	-6.2	-5.7	-5.4	-5.5	-4.8	-6.3	-4.4	-4.2
-4.9	-5.7	-5.4	-6.8	-10.1	-13.8	-11.7	-5.4	-6.7	-7.2	-6.3	-6.2	-5.9	-6.1	-8.0	-10.3	-13.7	-11.4	-8.6	-10.6	-14.8	-16.5	-13.8	-13.2	-13.8	-5.0	-4.5	-5.3	-6.7	-6.7	-6.3	-6.8	-6.9	-5.7	-4.9	-5.1
-5.3	-7.2	-8.3	-10.7	-12.7	-12.4	-8.6	-4.2	-5.0	-4.9	-4.9	-6.5	-6.7	-9.1	-10.2	-11.1	-10.2	-9.8	-10.4	-12.9	-14.9	-12.5	-9.5	-8.9	-7.0	-5.0	-3.8	-3.6	-4.6	-5.5	-5.9	-5.7	-6.1	-6.4	-5.9	-5.4
-6.8	-7.8	-8.6	-8.7	-8.5	-6.5	-5.2	-3.3	-3.3	-4.6	-6.0	-6.4	-8.0	-9.1	-8.1	-6.0	-4.8	-4.5	-4.8	-5.4	-4.0	-2.8	-5.1	-6.7	-4.6	-2.3	-2.3	-1.5	-2.3	-3.1	-3.6	-3.8	-4.4	-5.3	-4.6	-5.7
-5.7	-6.2	-6.7	-7.7	-8.9	-8.4	-7.5	-7.7	-6.8	-4.5	-3.6	-5.6	-7.4	-6.8	-5.4	-5.5	-6.1	-6.3	-3.9	-2.9	-2.1	-3.2	-7.6	-7.0	-4.1	-3.0	-2.9	-2.1	-2.9	-3.4	-3.3	-2.2	-2.5	-3.2	-4.3	-6.0
-10.3	-13.5	-15.2	-15.8	-16.0	-16.1	-15.8	-14.8	-13.2	-9.7	-5.0	-6.4	-10.5	-13.1	-13.3	-14.3	-14.8	-14.1	-12.0	-8.8	-8.6	-10.5	-10.4	-7.9	-6.8	-6.5	-6.7	-8.6	-10.4	-10.1	-9.1	-6.0	-4.5	-2.7	-3.6	-7.1
-9.2	-10.5	-11.3	-12.5	-14.1	-15.6	-16.7	-16.8	-15.9	-14.4	-10.8	-8.3	-11.5	-12.4	-14.2	-15.9	-16.9	-17.3	-16.2	-14.5	-13.7	-13.9	-12.8	-13.6	-14.9	-14.9	-13.6	-14.0	-16.0	-16.5	-16.9	-16.7	-14.7	-11.9	-7.8	-7.4
-7.9	-7.6	-7.1	-6.1	-6.2	-7.4	-9.0	-9.4	-9.8	-10.3	-12.0	-10.1	-9.6	-8.9	-9.3	-10.6	-11.9	-13.4	-15.0	-14.3	-12.2	-13.0	-12.5	-12.5	-14.0	-14.2	-13.0	-13.0	-13.6	-13.5	-13.8	-14.1	-13.0	-10.9	-10.0	-8.3
-3.9	-3.6	-3.9	-3.2	-3.2	-2.7	-2.2	-3.0	-3.2	-3.9	-4.6	-4.8	-4.4	-3.6	-3.9	-3.9	-4.3	-4.7	-5.2	-6.1	-5.9	-6.4	-6.4	-6.7	-6.7	-6.1	-4.7	-4.6	-5.7	-6.8	-6.9	-6.9	-6.5	-4.9	-3.9	-4.1
-1.4	-1.1	-1.2	-1.1	-1.5	-1.2	-1.0	-1.3	-1.5	-1.2	-.6	-1.0	-1.1	-.6	.0	.2	.3	.4	.0	-.8	-1.2	-1.4	-1.5	-1.4	-.9	-.2	.1	.3	.1	-.6	-1.0	-1.4	-1.8	-2.0	-2.1	-1.3
.9	1.0	1.1	1.1	1.4	1.3	.8	1.0	1.0	.7	1.0	1.0	1.6	2.4	3.4	4.1	3.9	3.7	3.1	2.5	2.0	1.9	1.7	1.7	1.9	2.9	2.9	2.7	2.6	2.1	1.6	1.2	.9	.8	.7	.6
4.9	5.0	4.8	4.7	4.2	3.6	3.1	2.8	2.8	2.7	2.7	3.7	5.7	7.5	8.2	8.1	7.5	7.1	6.2	5.8	5.5	5.1	6.6	9.1	7.9	6.5	8.3	9.3	9.3	7.8	8.3	9.6	7.6	6.4	6.7	5.2
8.0	7.3	6.7	7.3	8.3	8.3	7.6	7.4	8.2	8.4	7.9	10.6	8.8	10.2	10.2	11.1	13.3	17.0	19.0	20.8	20.0	21.2	25.1	28.4	20.5	20.4	25.7	27.6	29.7	29.1	30.1	30.2	27.0	21.8	12.3	8.9
10.8	10.2	9.5	10.3	11.0	12.2	14.3	17.1	19.3	17.5	14.4	14.1	16.4	16.5	18.3	19.9	21.9	24.1	26.0	27.8	29.4	31.1	32.7	33.1	33.1	33.3	33.3	33.6	34.0	32.5	29.8	26.8	23.5	19.6	14.2	12.2

Figure 31. ATOVS SD O-B brightness temperature differences (deg C). AUGUST 2006
Channel: HIRS11 (500 - 700 hPa)
NOAA15, using all observations



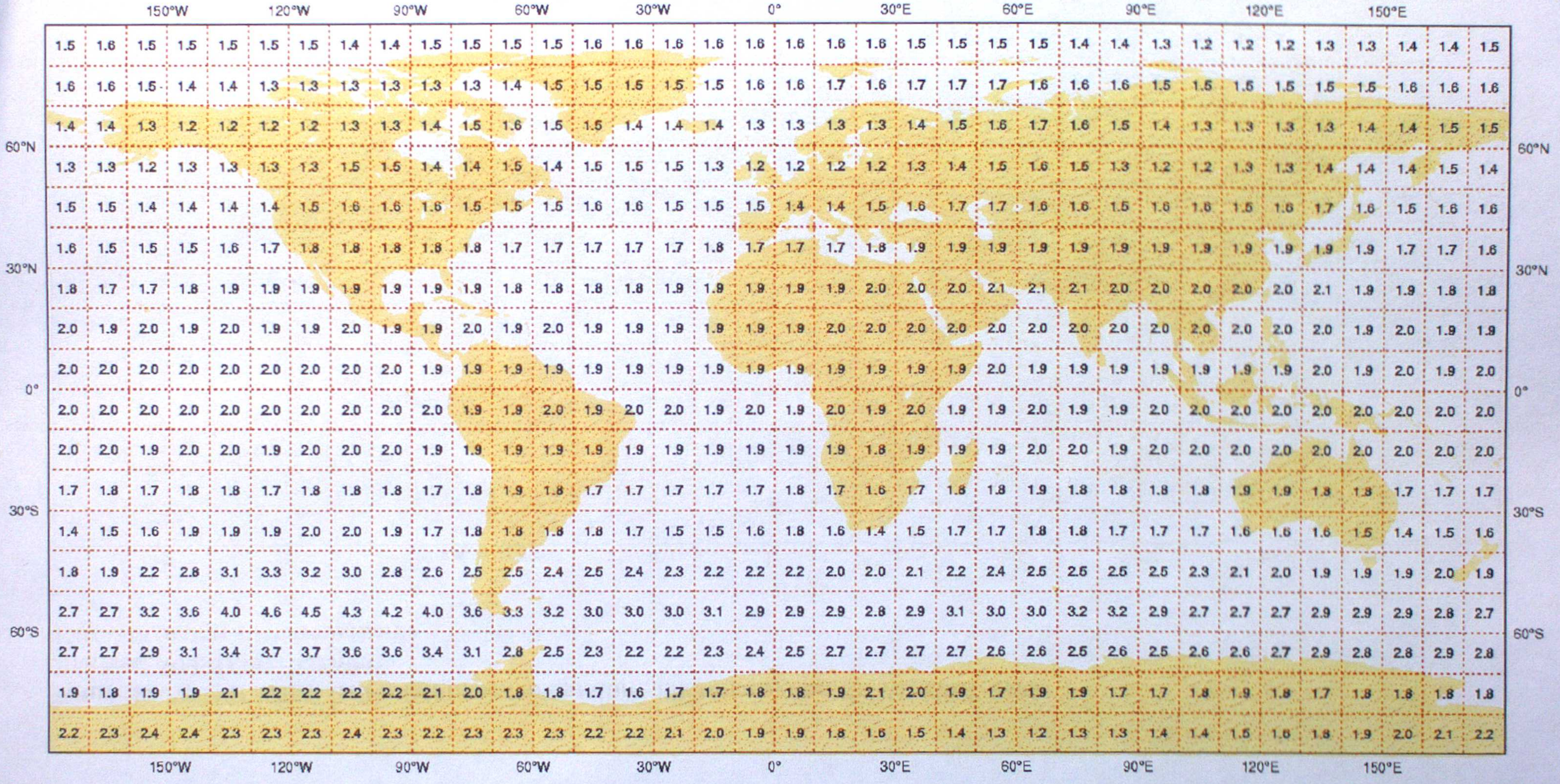
2.7	2.7	2.6	2.4	2.4	2.5	2.6	2.5	2.6	2.6	2.5	2.5	2.4	2.4	2.5	2.5	2.6	2.6	2.5	2.4	2.4	2.4	2.4	2.5	2.5	2.4	2.4	2.4	2.5	2.4	2.3	2.5	2.6	2.7	2.7	2.6
2.4	2.4	2.5	2.6	2.7	2.9	2.7	2.5	2.5	2.5	2.4	2.6	2.6	2.5	2.6	2.8	2.9	2.8	2.8	2.9	2.9	2.5	2.5	2.6	2.7	3.0	2.9	3.1	3.0	2.9	3.0	3.0	2.8	2.5	2.6	2.6
3.4	3.0	2.6	2.6	2.7	3.0	2.8	2.9	3.0	2.7	2.7	2.6	2.5	2.7	3.5	3.3	3.3	3.2	3.2	3.2	3.3	3.4	3.2	2.8	2.8	2.9	2.8	2.8	3.0	3.3	3.5	3.3	2.9	2.9	2.7	2.9
3.2	3.0	3.0	3.0	3.0	3.2	3.4	3.6	3.9	3.6	3.4	3.1	3.4	3.7	4.2	4.0	3.7	3.5	3.5	3.3	3.6	3.6	3.4	3.6	3.2	3.1	2.9	3.1	3.5	3.5	3.5	3.8	4.2	3.9	3.8	3.5
3.7	3.7	3.5	3.4	3.3	4.1	4.1	4.2	4.6	4.7	4.6	4.5	4.6	4.8	4.5	4.4	4.6	4.2	3.9	3.8	4.5	4.9	4.4	4.3	5.0	4.4	3.9	4.7	4.5	4.0	4.3	4.5	4.6	4.3	4.1	4.2
3.6	3.3	3.3	3.8	3.8	3.9	4.9	4.3	4.5	4.6	4.4	4.6	4.4	4.0	4.6	4.2	4.8	4.8	4.3	4.5	4.7	5.0	5.5	4.5	4.8	3.4	3.3	3.9	4.5	4.3	4.4	4.2	4.6	4.4	4.0	4.0
3.9	3.6	3.6	4.1	4.5	5.3	4.6	3.3	3.1	3.4	3.3	3.5	3.7	3.7	3.9	4.8	5.9	4.9	5.0	4.5	4.6	5.5	4.4	4.8	5.1	3.7	2.6	2.7	3.5	3.8	3.7	3.9	4.6	4.4	4.3	3.9
3.9	4.1	4.1	4.8	5.4	4.5	3.8	3.1	2.8	3.2	3.7	3.7	4.0	4.3	4.6	4.0	3.7	3.7	3.8	3.9	3.9	3.2	3.3	2.9	2.8	2.5	2.4	2.1	2.5	3.0	3.4	3.7	4.1	3.9	3.4	3.7
4.4	4.6	4.6	4.3	5.0	5.0	5.0	4.7	4.3	3.6	2.7	3.5	3.7	4.1	4.3	4.5	4.6	4.3	3.7	2.9	2.4	3.3	3.2	3.5	3.2	2.8	2.6	2.3	2.7	2.6	2.8	2.4	2.7	2.8	3.4	4.0
4.4	3.8	3.1	3.0	3.2	3.2	3.5	3.3	3.4	4.0	3.5	3.4	3.5	3.1	3.5	3.7	3.3	3.2	4.1	5.5	5.4	4.7	3.9	4.3	4.6	4.2	4.9	5.1	4.3	4.3	4.3	5.2	4.1	3.2	3.2	4.2
4.3	4.9	4.8	5.0	4.6	3.8	3.1	3.0	3.0	3.8	5.8	4.1	3.6	3.8	3.7	2.6	2.4	2.8	3.7	5.0	4.8	3.3	3.5	3.2	2.9	3.1	4.0	4.0	3.4	3.2	3.4	3.6	4.5	6.4	6.1	4.8
5.1	4.8	4.9	4.8	5.3	4.8	4.8	4.6	4.3	4.0	4.8	5.5	4.8	4.6	4.8	4.7	4.2	3.8	4.2	4.4	4.5	4.9	4.8	4.5	3.5	3.2	3.7	3.8	4.3	4.7	4.2	3.9	4.1	4.9	4.9	5.3
4.2	3.9	4.0	4.2	4.2	3.8	3.7	4.1	4.1	4.1	5.3	5.2	4.3	4.1	4.2	4.3	4.5	4.3	4.7	4.5	5.2	5.3	4.9	4.9	5.0	4.7	4.3	4.4	4.8	4.9	4.4	4.5	4.7	4.5	3.7	4.2
3.4	3.4	3.4	3.4	3.7	3.9	3.6	3.9	3.8	4.0	3.8	3.9	3.8	3.5	3.3	3.4	3.2	3.2	3.6	3.9	3.7	4.0	3.9	3.8	3.8	3.8	3.6	3.2	3.1	3.3	3.5	3.3	3.7	3.7	3.5	3.5
3.1	3.0	3.2	2.9	2.9	3.0	3.2	3.3	3.3	3.4	3.5	3.7	3.3	2.8	2.8	2.7	2.6	2.6	2.9	3.1	3.4	3.3	3.3	3.7	3.5	2.8	2.8	2.6	2.7	2.9	3.0	3.3	3.1	3.3	3.3	3.1
2.9	2.9	2.9	2.6	2.5	2.7	2.8	3.0	3.0	2.9	3.1	4.2	3.5	2.9	2.7	2.4	2.1	2.2	2.4	2.6	2.8	3.3	4.9	6.4	4.5	2.9	4.9	6.4	6.6	6.0	7.1	8.3	6.1	4.2	3.1	3.1
2.1	2.1	2.6	3.0	3.5	3.5	3.5	4.1	4.6	5.2	4.7	4.6	2.7	2.8	3.0	4.3	5.6	6.5	6.8	7.7	9.0	7.7	6.0	4.5	7.1	6.9	5.9	5.8	6.1	6.2	5.3	4.4	4.6	4.6	4.6	2.2
5.5	5.6	5.5	5.5	5.2	5.3	6.0	6.9	6.1	5.4	6.0	6.8	7.3	6.8	6.3	5.4	5.2	4.9	4.6	4.0	3.3	3.3	2.8	2.5	2.5	2.5	2.5	2.9	3.6	3.9	4.4	4.9	5.1	4.9	6.3	5.8

Figure 32. ATOVS MEAN O-B brightness temperature differences (deg C). AUGUST 2006
Channel: HIRS4 (400 hPa)
NOAA15, using all observations



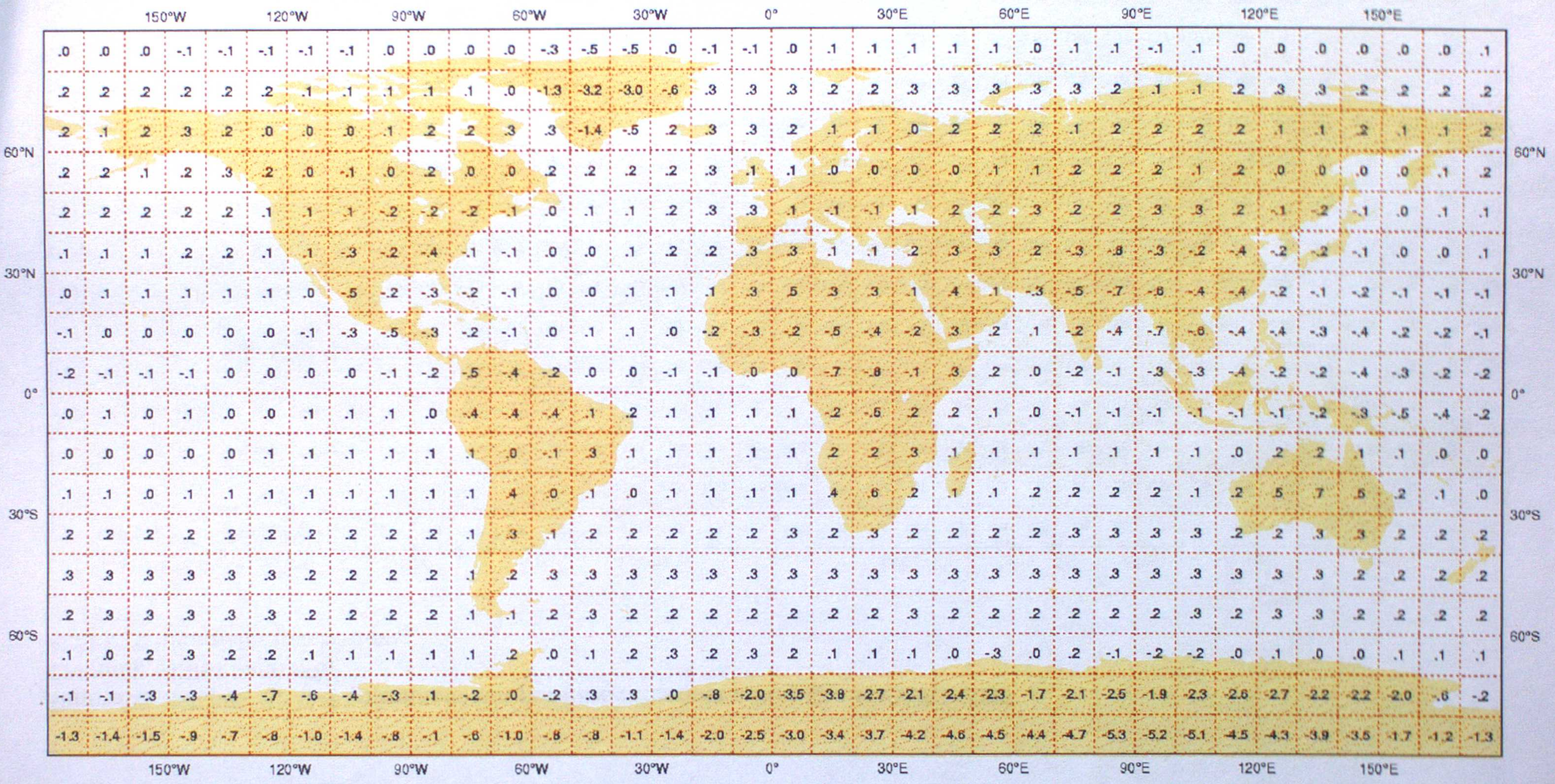
-7.8	-7.7	-7.7	-7.6	-7.5	-7.5	-7.5	-7.5	-7.5	-7.5	-7.6	-7.7	-7.7	-7.7	-7.7	-7.8	-7.9	-7.9	-7.9	-8.0	-8.0	-8.1	-8.1	-8.2	-8.2	-8.2	-8.2	-8.2	-8.1	-8.1	-8.0	-8.0	-7.9	-7.9	-7.9	-7.9
-6.7	-6.6	-6.6	-6.5	-6.4	-6.3	-6.3	-6.4	-6.5	-6.7	-6.9	-6.9	-6.9	-6.7	-6.6	-6.7	-6.7	-6.7	-6.6	-6.6	-6.5	-6.5	-6.6	-6.7	-6.8	-6.9	-7.0	-7.0	-7.0	-6.9	-6.9	-6.9	-6.9	-6.8	-6.8	-6.7
-6.0	-6.2	-6.2	-6.0	-5.8	-5.7	-5.7	-5.8	-6.0	-6.2	-6.5	-6.6	-6.6	-6.4	-6.2	-6.2	-6.2	-6.1	-5.9	-5.7	-5.7	-5.7	-5.7	-5.8	-5.9	-6.1	-6.3	-6.3	-6.3	-6.2	-6.2	-6.2	-6.1	-6.1	-6.0	-5.9
-5.2	-5.1	-5.3	-5.1	-5.0	-5.0	-5.0	-5.2	-5.2	-5.4	-5.8	-6.0	-6.0	-5.7	-5.5	-5.3	-5.3	-5.6	-5.8	-5.7	-5.6	-5.5	-5.2	-5.2	-5.3	-5.4	-5.6	-5.6	-5.6	-5.6	-5.7	-5.6	-5.4	-5.3	-5.1	-5.1
-4.0	-3.8	-3.8	-3.7	-3.9	-4.1	-4.2	-4.3	-4.4	-4.5	-4.6	-4.8	-4.7	-4.5	-4.3	-4.0	-4.1	-4.4	-4.6	-4.8	-4.7	-4.9	-4.7	-4.7	-4.8	-4.8	-4.8	-4.9	-4.8	-4.9	-4.9	-5.0	-4.9	-4.7	-4.4	-4.1
-3.1	-3.0	-2.9	-3.0	-3.3	-3.7	-3.9	-3.9	-4.0	-4.0	-3.8	-3.7	-3.5	-3.3	-3.5	-3.4	-3.6	-3.6	-3.4	-3.9	-4.2	-4.8	-4.8	-5.0	-5.5	-5.2	-5.2	-5.1	-4.9	-4.9	-4.6	-4.6	-4.4	-3.9	-3.6	-3.3
-2.6	-2.6	-2.5	-2.9	-3.1	-3.2	-3.5	-3.2	-3.1	-3.1	-2.8	-2.8	-2.6	-2.7	-3.0	-3.0	-3.0	-3.1	-3.1	-3.5	-3.7	-4.1	-4.2	-4.4	-4.7	-4.8	-4.6	-4.4	-4.1	-4.2	-3.9	-3.8	-3.8	-3.3	-3.1	-2.8
-2.6	-2.8	-2.6	-2.8	-2.8	-2.8	-3.0	-2.7	-2.7	-2.6	-2.5	-2.6	-2.4	-2.6	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.7	-2.8	-3.2	-3.2	-3.3	-3.3	-3.4	-3.3	-3.3	-3.3	-3.3	-3.1	-3.2	-2.9	-2.9	-2.7
-2.7	-2.8	-2.7	-2.7	-2.5	-2.6	-2.6	-2.6	-2.5	-2.5	-2.3	-2.4	-2.4	-2.3	-2.3	-2.4	-2.4	-2.4	-2.2	-2.1	-2.2	-2.2	-2.5	-2.3	-2.4	-2.4	-2.5	-2.5	-2.6	-2.6	-2.7	-2.6	-2.7	-2.7	-2.8	-2.7
-2.7	-2.9	-2.8	-2.8	-2.6	-2.7	-2.6	-2.6	-2.5	-2.4	-2.2	-2.3	-2.4	-2.5	-2.3	-2.5	-2.5	-2.4	-2.4	-2.1	-2.4	-2.3	-2.4	-2.2	-2.3	-2.4	-2.4	-2.6	-2.7	-2.6	-2.8	-2.6	-2.6	-2.6	-2.7	-2.8
-2.4	-2.4	-2.4	-2.2	-2.2	-2.3	-2.1	-2.2	-2.1	-2.1	-2.0	-1.9	-2.0	-2.0	-2.0	-2.2	-2.2	-2.2	-2.3	-2.1	-2.4	-2.4	-2.4	-2.5	-2.5	-2.6	-2.6	-2.6	-2.8	-2.7	-2.8	-2.8	-2.8	-2.7	-2.6	-2.5
-1.9	-1.7	-1.8	-1.6	-1.5	-1.4	-1.3	-1.4	-1.3	-1.2	-1.2	-1.1	-1.2	-1.1	-1.1	-1.4	-1.4	-1.5	-1.7	-1.7	-1.9	-2.0	-2.0	-2.1	-2.0	-2.0	-2.0	-2.0	-2.2	-2.1	-2.1	-2.0	-1.9	-2.0	-2.0	-2.0
-1.3	-1.1	-1.4	-1.2	-1.1	-.9	-.6	-.5	-.4	-.1	.0	.2	.1	.0	.0	-.3	-.4	-.5	-.8	-.9	-1.0	-1.0	-.8	-.7	-.6	-.5	-.5	-.8	-.8	-.6	-.6	-.5	-.5	-.9	-1.2	-1.4
.0	-.1	-.3	-.2	.0	.3	.7	1.2	1.6	2.0	2.4	2.9	3.1	3.1	3.0	2.7	2.4	2.1	1.8	1.6	1.5	1.5	1.6	1.6	1.9	2.1	2.2	2.1	2.2	2.1	2.0	1.8	1.6	1.1	.6	.2
4.7	4.4	4.2	4.0	4.2	4.5	4.8	5.3	5.8	6.6	7.4	8.1	8.8	9.2	9.4	9.3	8.8	8.3	7.8	7.3	7.2	7.0	7.1	7.3	7.4	8.1	8.5	8.6	8.4	7.9	7.4	6.8	6.1	5.7	5.3	5.0
11.5	11.3	11.3	11.0	10.9	11.1	11.2	11.4	11.8	12.3	13.0	13.6	14.5	15.0	15.2	15.3	15.0	14.5	14.1	13.9	13.8	13.7	13.7	14.0	14.1	14.3	14.8	14.9	14.8	14.3	14.0	13.6	12.8	12.2	11.9	11.7
16.2	16.0	15.9	15.9	15.9	15.9	15.9	16.0	16.2	16.4	16.6	17.0	17.3	17.5	17.7	17.9	18.2	18.4	18.7	18.8	18.7	18.5	18.6	19.2	18.6	18.8	19.5	19.5	19.8	19.5	19.4	19.1	18.2	17.6	17.0	16.5
18.4	18.4	18.5	18.4	18.3	18.4	18.6	19.0	19.1	19.0	18.8	19.0	19.4	19.3	19.3	19.4	19.6	19.9	20.2	20.5	21.0	21.5	22.2	22.6	22.8	22.8	22.7	22.4	22.0	21.6	20.9	20.2	19.6	19.2	18.9	18.7

Figure 33. ATOVS SD O-B brightness temperature differences (deg C). AUGUST 2006
Channel: HIRS4 (400 hPa)
NOAA15, using all observations



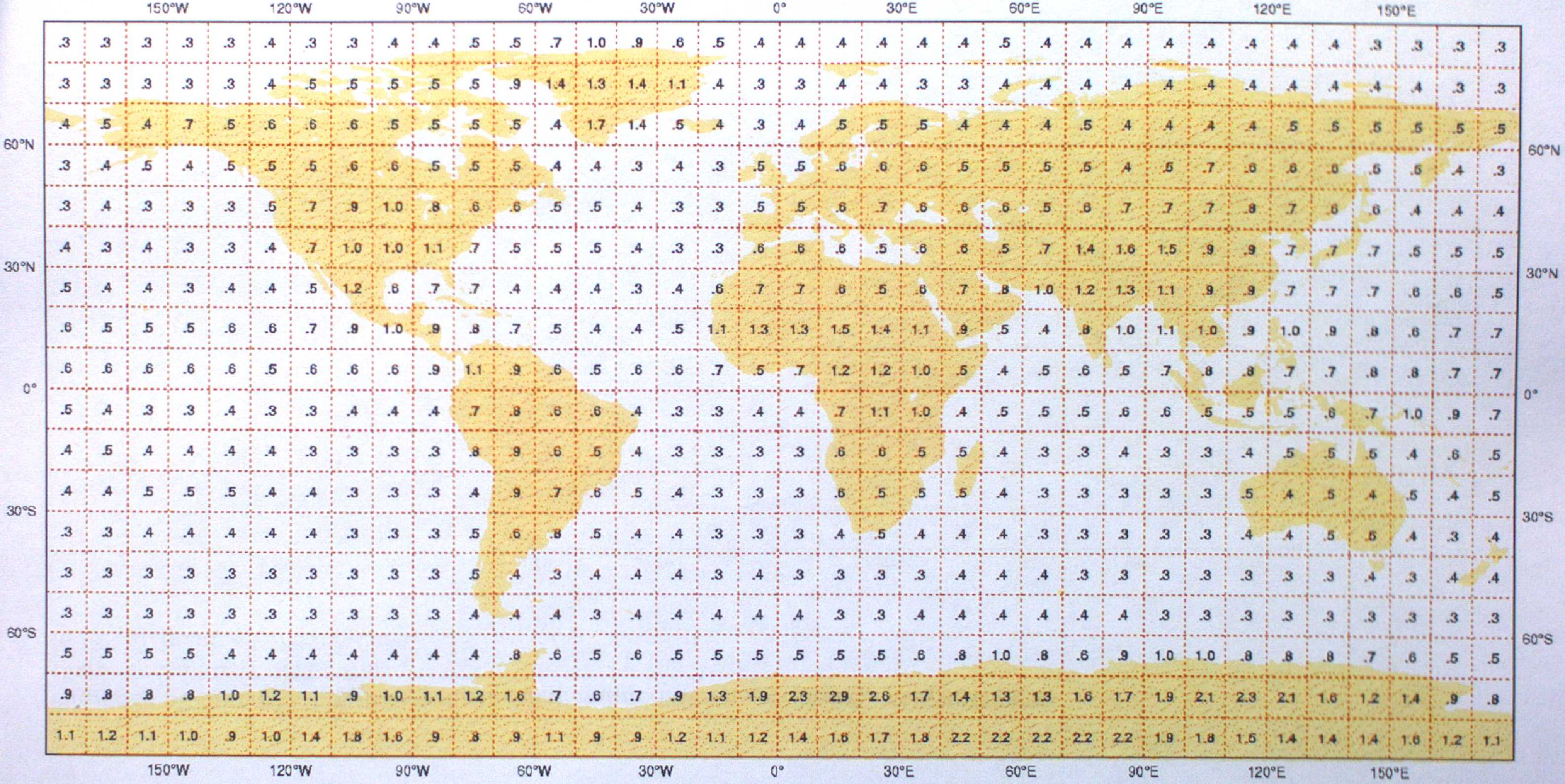
1.5	1.6	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.4	1.4	1.3	1.2	1.2	1.2	1.3	1.3	1.4	1.4	1.5
1.6	1.6	1.5	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.4	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.7	1.6	1.7	1.7	1.7	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6
1.4	1.4	1.3	1.2	1.2	1.2	1.2	1.3	1.3	1.4	1.5	1.6	1.5	1.5	1.4	1.4	1.4	1.3	1.3	1.3	1.3	1.4	1.5	1.6	1.7	1.6	1.5	1.4	1.3	1.3	1.3	1.3	1.4	1.4	1.5	1.5
1.3	1.3	1.2	1.3	1.3	1.3	1.3	1.5	1.5	1.4	1.4	1.5	1.4	1.5	1.5	1.5	1.3	1.2	1.2	1.2	1.2	1.3	1.4	1.5	1.6	1.5	1.3	1.2	1.2	1.3	1.3	1.4	1.4	1.4	1.5	1.4
1.5	1.5	1.4	1.4	1.4	1.4	1.5	1.6	1.6	1.6	1.5	1.5	1.5	1.6	1.6	1.5	1.5	1.5	1.4	1.4	1.5	1.6	1.7	1.7	1.6	1.6	1.5	1.6	1.6	1.5	1.6	1.7	1.6	1.5	1.6	1.6
1.6	1.5	1.5	1.5	1.6	1.7	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.8	1.7	1.7	1.7	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.7	1.7	1.6
1.8	1.7	1.7	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	1.9	1.9	1.8	1.8
2.0	1.9	2.0	1.9	2.0	1.9	1.9	2.0	1.9	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9
2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	1.9	2.0
2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	1.9	2.0	2.0	1.9	2.0	1.9	2.0	1.9	2.0	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
2.0	2.0	1.9	2.0	2.0	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
1.7	1.8	1.7	1.8	1.8	1.7	1.8	1.8	1.8	1.7	1.8	1.9	1.8	1.7	1.7	1.7	1.7	1.7	1.8	1.7	1.6	1.7	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.7	1.7	1.7
1.4	1.5	1.6	1.9	1.9	1.9	2.0	2.0	1.9	1.7	1.8	1.8	1.8	1.8	1.7	1.5	1.5	1.6	1.8	1.6	1.4	1.5	1.7	1.7	1.8	1.8	1.7	1.7	1.7	1.6	1.6	1.6	1.5	1.4	1.5	1.6
1.8	1.9	2.2	2.8	3.1	3.3	3.2	3.0	2.8	2.6	2.5	2.5	2.4	2.5	2.4	2.3	2.2	2.2	2.2	2.0	2.0	2.1	2.2	2.4	2.5	2.5	2.5	2.5	2.3	2.1	2.0	1.9	1.9	1.9	2.0	1.9
2.7	2.7	3.2	3.6	4.0	4.6	4.5	4.3	4.2	4.0	3.6	3.3	3.2	3.0	3.0	3.0	3.1	2.9	2.9	2.9	2.8	2.9	3.1	3.0	3.0	3.2	3.2	2.9	2.7	2.7	2.7	2.9	2.9	2.9	2.8	2.7
2.7	2.7	2.9	3.1	3.4	3.7	3.7	3.6	3.6	3.4	3.1	2.8	2.5	2.3	2.2	2.2	2.3	2.4	2.5	2.7	2.7	2.7	2.7	2.6	2.6	2.5	2.6	2.5	2.6	2.6	2.7	2.9	2.8	2.8	2.9	2.8
1.9	1.8	1.9	1.9	2.1	2.2	2.2	2.2	2.2	2.1	2.0	1.8	1.8	1.7	1.6	1.7	1.7	1.8	1.8	1.9	2.1	2.0	1.9	1.7	1.9	1.9	1.7	1.7	1.8	1.9	1.8	1.7	1.8	1.8	1.8	1.8
2.2	2.3	2.4	2.4	2.3	2.3	2.3	2.4	2.3	2.2	2.3	2.3	2.3	2.2	2.2	2.1	2.0	1.9	1.9	1.8	1.6	1.5	1.4	1.3	1.2	1.3	1.3	1.4	1.4	1.5	1.6	1.8	1.9	2.0	2.1	2.2

Figure 34. ATOVS MEAN O-B brightness temperature differences (deg C). AUGUST 2006
Channel: AMSUA-5 (700 hPa)
NOAA15, using all observations



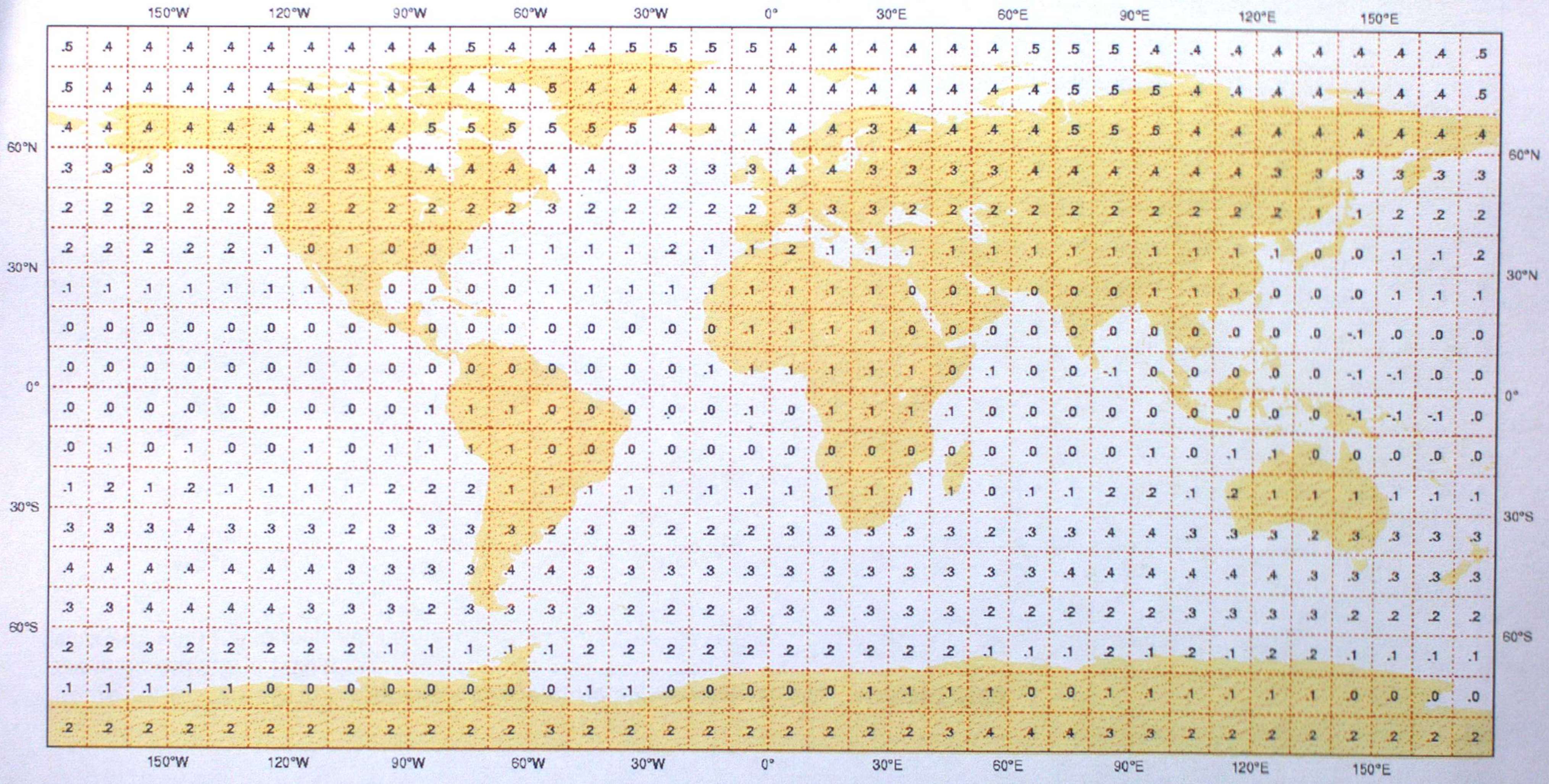
.0	.0	.0	-.1	-.1	-.1	-.1	-.1	.0	.0	.0	.0	-.3	-.5	-.5	.0	-.1	-.1	.0	.1	.1	.1	.1	.1	.0	.1	.1	-.1	.1	.0	.0	.0	.0	.0	.0	.1
.2	.2	.2	.2	.2	.2	.1	.1	.1	.1	.1	.0	-1.3	-3.2	-3.0	-.6	.3	.3	.3	.2	.2	.3	.3	.3	.3	.3	.3	.2	.1	.1	.2	.3	.3	.2	.2	.2	.2
.2	.1	.2	.3	.2	.0	.0	.0	.1	.2	.2	.3	.3	-1.4	-.5	.2	.3	.3	.2	.1	.1	.0	.2	.2	.2	.2	.1	.2	.2	.2	.2	.1	.1	.2	.1	.1	.2
.2	.2	.1	.2	.3	.2	.0	-.1	.0	.2	.0	.0	.2	.2	.2	.2	.3	.1	.1	.0	.0	.0	.0	.1	.1	.1	.2	.2	.2	.1	.2	.0	.0	.0	.0	.1	.2
.2	.2	.2	.2	.2	.1	.1	.1	-.2	-.2	-.2	-.1	.0	.1	.1	.2	.3	.3	.1	-.1	-.1	.1	.2	.2	.3	.2	.3	.2	.2	.3	.3	.2	-.1	-.2	-.1	.0	.1	.1
.1	.1	.1	.2	.2	.1	.1	-.3	-.2	-.4	-.1	-.1	.0	.0	.1	.2	.2	.3	.3	.1	.1	.2	.3	.3	.2	-.3	-.8	-.3	-.2	-.4	-.2	-.2	-.1	.0	.0	.1
.0	.1	.1	.1	.1	.1	.0	-.5	-.2	-.3	-.2	-.1	.0	.0	.1	.1	.1	.3	.5	.3	.3	.1	.4	.1	-.3	-.5	-.7	-.6	-.4	-.4	-.2	-.1	-.2	-.1	-.1	-.1
-.1	.0	.0	.0	.0	.0	-.1	-.3	-.5	-.3	-.2	-.1	.0	.1	.1	.0	-.2	-.3	-.2	-.5	-.4	-.2	.3	.2	.1	-.2	-.4	-.7	-.6	-.4	-.4	-.3	-.4	-.2	-.2	-.1
-.2	-.1	-.1	-.1	.0	.0	.0	.0	-.1	-.2	-.5	-.4	-.2	.0	.0	-.1	-.1	.0	.0	-.7	-.8	-.1	.3	.2	.0	-.2	-.1	-.3	-.3	-.4	-.2	-.2	-.4	-.3	-.2	-.2
.0	.1	.0	.1	.0	.0	.1	.1	.1	.0	-.4	-.4	-.4	.1	.2	.1	.1	.1	.1	-.2	-.6	.2	.2	.1	.0	-.1	-.1	-.1	-.1	-.1	-.1	-.2	-.3	-.5	-.4	-.2
.0	.0	.0	.0	.0	.1	.1	.1	.1	.1	.1	.0	-.1	.3	.1	.1	.1	.1	.2	.2	.3	.1	.1	.1	.1	.1	.1	.1	.1	.0	.2	.2	.1	.1	.0	.0
.1	.1	.0	.1	.1	.1	.1	.1	.1	.1	.1	.4	.0	.1	.0	.1	.1	.1	.1	.4	.6	.2	.1	.1	.2	.2	.2	.2	.1	.2	.5	.7	.5	.2	.1	.0
.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.1	.3	.1	.2	.2	.2	.2	.2	.3	.2	.3	.2	.2	.2	.2	.3	.3	.3	.3	.2	.2	.3	.3	.2	.2	.2
.3	.3	.3	.3	.3	.3	.2	.2	.2	.2	.1	.2	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.2	.2	.2	.2
.2	.3	.3	.3	.3	.3	.2	.2	.2	.2	.1	.1	.2	.3	.2	.2	.2	.2	.2	.2	.2	.3	.2	.2	.2	.2	.2	.2	.3	.2	.3	.3	.2	.2	.2	.2
.1	.0	.2	.3	.2	.2	.1	.1	.1	.1	.1	.2	.0	.1	.2	.3	.2	.3	.2	.1	.1	.1	.0	-.3	.0	.2	-.1	-.2	-.2	.0	.1	.0	.0	.1	.1	.1
-.1	-.1	-.3	-.3	-.4	-.7	-.6	-.4	-.3	.1	-.2	.0	-.2	.3	.3	.0	-.8	-2.0	-3.5	-3.8	-2.7	-2.1	-2.4	-2.3	-1.7	-2.1	-2.5	-1.9	-2.3	-2.6	-2.7	-2.2	-2.2	-2.0	-.6	-.2
-1.3	-1.4	-1.5	-.9	-.7	-.8	-1.0	-1.4	-.8	-.1	-.6	-1.0	-.8	-.8	-1.1	-1.4	-2.0	-2.5	-3.0	-3.4	-3.7	-4.2	-4.6	-4.5	-4.4	-4.7	-5.3	-5.2	-5.1	-4.5	-4.3	-3.9	-3.5	-1.7	-1.2	-1.3

Figure 35. ATOVS SD O-B brightness temperature differences (deg C). AUGUST 2006
Channel: AMSUA-5 (700 hPa)
NOAA15, using all observations



.3	.3	.3	.3	.3	.4	.3	.3	.4	.4	.5	.5	.7	1.0	.9	.6	.5	.4	.4	.4	.4	.4	.4	.5	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3
.3	.3	.3	.3	.3	.4	.5	.5	.5	.5	.5	.9	1.4	1.3	1.4	1.1	.4	.3	.3	.4	.4	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3
.4	.5	.4	.7	.5	.6	.6	.6	.5	.5	.5	.5	.4	1.7	1.4	.5	.4	.3	.4	.5	.5	.5	.4	.4	.4	.5	.4	.4	.4	.4	.5	.5	.5	.5	.5	.5
.3	.4	.5	.4	.5	.5	.5	.6	.6	.5	.5	.5	.4	.4	.3	.4	.3	.5	.5	.6	.6	.6	.5	.5	.5	.5	.4	.5	.7	.6	.6	.6	.5	.5	.4	.3
.3	.4	.3	.3	.3	.5	.7	.9	1.0	.8	.6	.6	.5	.5	.4	.3	.3	.5	.5	.6	.7	.6	.6	.6	.5	.6	.7	.7	.7	.8	.7	.6	.6	.4	.4	.4
.4	.3	.4	.3	.3	.4	.7	1.0	1.0	1.1	.7	.5	.5	.5	.4	.3	.3	.6	.6	.6	.5	.6	.6	.5	.7	1.4	1.6	1.5	.9	.9	.7	.7	.7	.5	.5	.5
.5	.4	.4	.3	.4	.4	.5	1.2	.6	.7	.7	.4	.4	.4	.3	.4	.6	.7	.7	.6	.5	.6	.7	.8	1.0	1.2	1.3	1.1	.9	.9	.7	.7	.7	.6	.6	.5
.6	.5	.5	.5	.6	.6	.7	.9	1.0	.9	.8	.7	.5	.4	.4	.5	1.1	1.3	1.3	1.5	1.4	1.1	.9	.5	.4	.8	1.0	1.1	1.0	.9	1.0	.9	.8	.6	.7	.7
.6	.6	.6	.6	.6	.5	.6	.6	.6	.9	1.1	.9	.6	.5	.6	.6	.7	.5	.7	1.2	1.2	1.0	.5	.4	.5	.6	.5	.7	.8	.8	.7	.7	.8	.8	.7	.7
.5	.4	.3	.3	.4	.3	.3	.4	.4	.4	.7	.8	.6	.6	.4	.3	.3	.4	.4	.7	1.1	1.0	.4	.5	.5	.5	.6	.6	.5	.5	.5	.6	.7	1.0	.9	.7
.4	.5	.4	.4	.4	.4	.3	.3	.3	.3	.8	.9	.6	.5	.4	.3	.3	.3	.3	.6	.6	.5	.5	.4	.3	.3	.4	.3	.3	.4	.5	.5	.5	.4	.6	.5
.4	.4	.5	.5	.5	.4	.4	.3	.3	.3	.4	.9	.7	.6	.5	.4	.3	.3	.3	.6	.5	.5	.5	.4	.3	.3	.3	.3	.3	.5	.4	.5	.4	.5	.4	.5
.3	.3	.4	.4	.4	.4	.4	.3	.3	.3	.5	.6	.8	.5	.4	.4	.3	.3	.3	.4	.5	.4	.4	.4	.3	.3	.3	.3	.3	.4	.4	.5	.5	.4	.3	.4
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.5	.4	.3	.4	.4	.4	.3	.4	.3	.3	.3	.3	.4	.4	.4	.3	.3	.3	.3	.3	.3	.3	.4	.3	.4	.4
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.4	.3	.4	.4	.4	.4	.4	.3	.3	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3
.5	.5	.5	.5	.4	.4	.4	.4	.4	.4	.4	.8	.6	.5	.6	.5	.5	.5	.5	.5	.5	.6	.8	1.0	.8	.6	.9	1.0	1.0	.8	.8	.8	.7	.6	.5	.5
.9	.8	.8	.8	1.0	1.2	1.1	.9	1.0	1.1	1.2	1.6	.7	.6	.7	.9	1.3	1.9	2.3	2.9	2.6	1.7	1.4	1.3	1.3	1.6	1.7	1.9	2.1	2.3	2.1	1.6	1.2	1.4	.9	.8
1.1	1.2	1.1	1.0	.9	1.0	1.4	1.8	1.6	.9	.8	.9	1.1	.9	.9	1.2	1.1	1.2	1.4	1.6	1.7	1.8	2.2	2.2	2.2	2.2	2.2	1.9	1.8	1.5	1.4	1.4	1.4	1.6	1.2	1.1

Figure 36. ATOVS MEAN O-B brightness temperature differences (deg C). AUGUST 2006
Channel: AMSUA-7 (300 hPa)
NOAA15, using all observations



.5	.4	.4	.4	.4	.4	.4	.4	.4	.4	.5	.4	.4	.4	.5	.5	.5	.5	.4	.4	.4	.4	.4	.4	.5	.5	.5	.4	.4	.4	.4	.4	.4	.4	.4	.5
.5	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.5	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.5	.5	.5	.4	.4	.4	.4	.4	.4	.4	.5
.4	.4	.4	.4	.4	.4	.4	.4	.4	.5	.5	.5	.5	.5	.5	.4	.4	.4	.4	.4	.3	.4	.4	.4	.4	.5	.5	.5	.4	.4	.4	.4	.4	.4	.4	.4
.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.4	.4	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.3
.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.3	.2	.2	.2	.2	.2	.3	.3	.3	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.1	.1	.2	.2	.2
.2	.2	.2	.2	.2	.1	.0	.1	.0	.0	.1	.1	.1	.1	.1	.2	.1	.1	.2	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.0	.0	.1	.1	.2
.1	.1	.1	.1	.1	.1	.1	.1	.0	.0	.0	.0	.1	.1	.1	.1	.1	.1	.1	.1	.1	.0	.0	.1	.0	.0	.0	.1	.1	.1	.0	.0	.0	.1	.1	.1
.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	-.1	.0	.0	.0
.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1	.1	.1	.0	.1	.0	.0	-.1	.0	.0	.0	.0	.0	-.1	-.1	.0	.0
.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1	.0	.0	.0	.0	.0	.1	.0	.1	.1	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	-.1	-.1	-.1	.0
.0	.1	.0	.1	.0	.0	.1	.0	.1	.1	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.1	.1	.0	.0	.0	.0	.0
.1	.2	.1	.2	.1	.1	.1	.1	.2	.2	.2	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.0	.1	.1	.2	.2	.1	.2	.1	.1	.1	.1	.1	.1
.3	.3	.3	.4	.3	.3	.3	.2	.3	.3	.3	.3	.2	.3	.3	.2	.2	.2	.3	.3	.3	.3	.3	.2	.3	.3	.4	.4	.3	.3	.3	.2	.3	.3	.3	.3
.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.4	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.3
.3	.3	.4	.4	.4	.4	.3	.3	.3	.2	.3	.3	.3	.3	.2	.2	.2	.3	.3	.3	.3	.3	.3	.2	.2	.2	.2	.2	.3	.3	.3	.3	.2	.2	.2	.2
.2	.2	.3	.2	.2	.2	.2	.2	.1	.1	.1	.1	.1	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.1	.1	.1	.2	.1	.2	.1	.2	.2	.1	.1	.1	.1
.1	.1	.1	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.0	.0	.0	.0	.0	.1	.1	.1	.1	.0	.0	.1	.1	.1	.1	.1	.1	.0	.0	.0	.0
.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.3	.2	.2	.2	.2	.2	.2	.2	.2	.2	.3	.4	.4	.4	.3	.3	.2	.2	.2	.2	.2	.2	.2	.2

Figure 37. ATOVS SD O-B brightness temperature differences (deg C). AUGUST 2006
Channel: AMSUA-7 (300 hPa)
NOAA15, using all observations

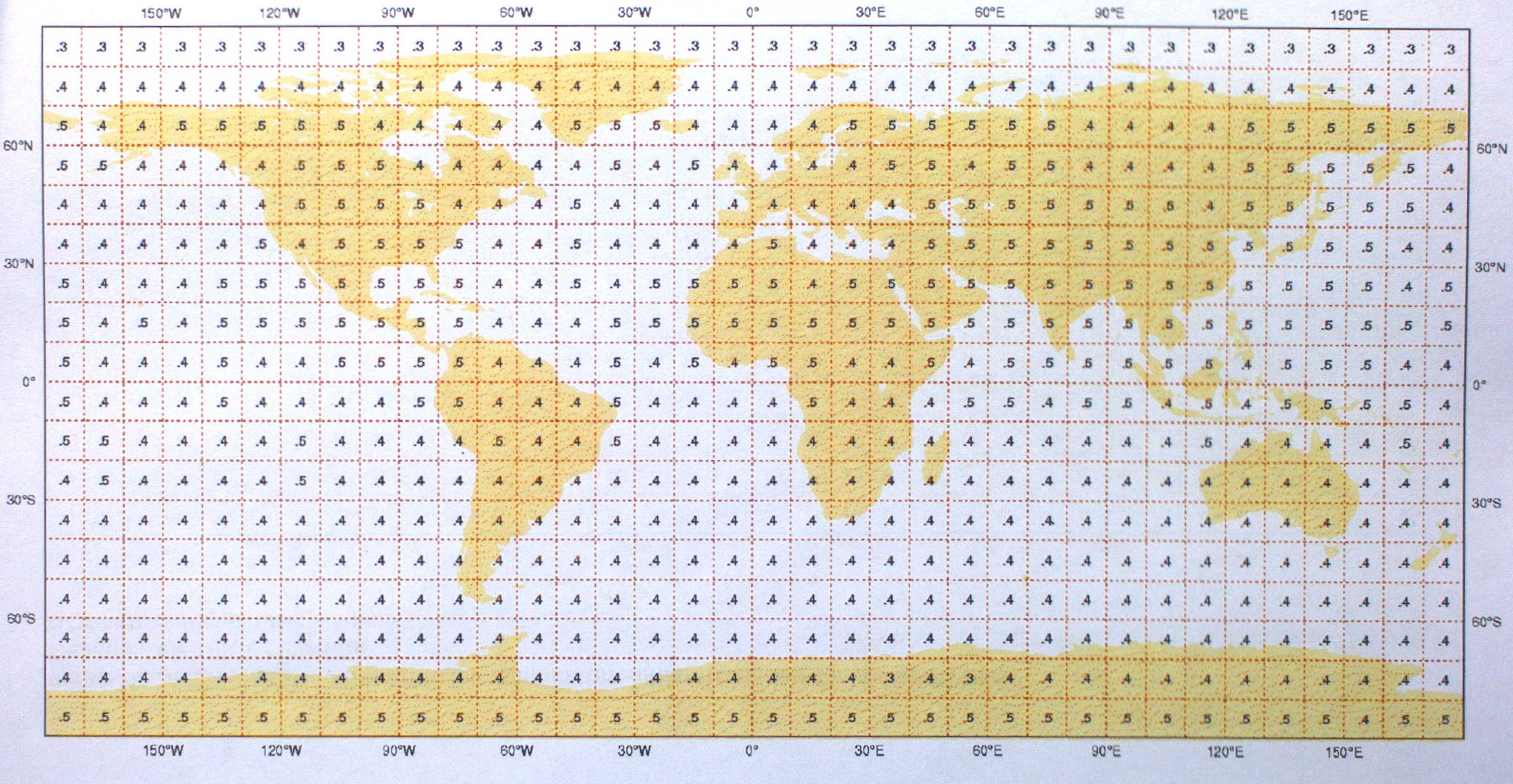
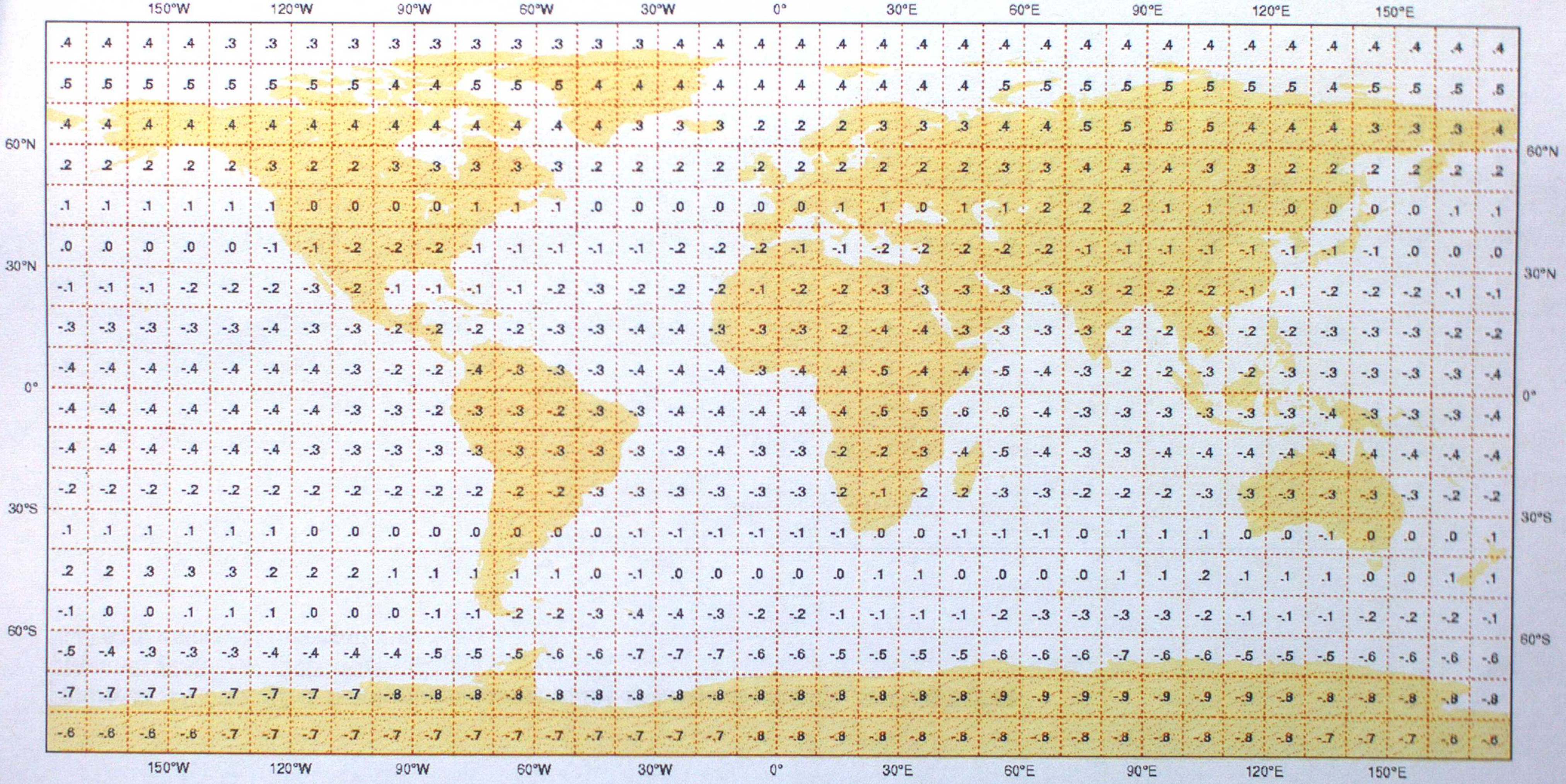
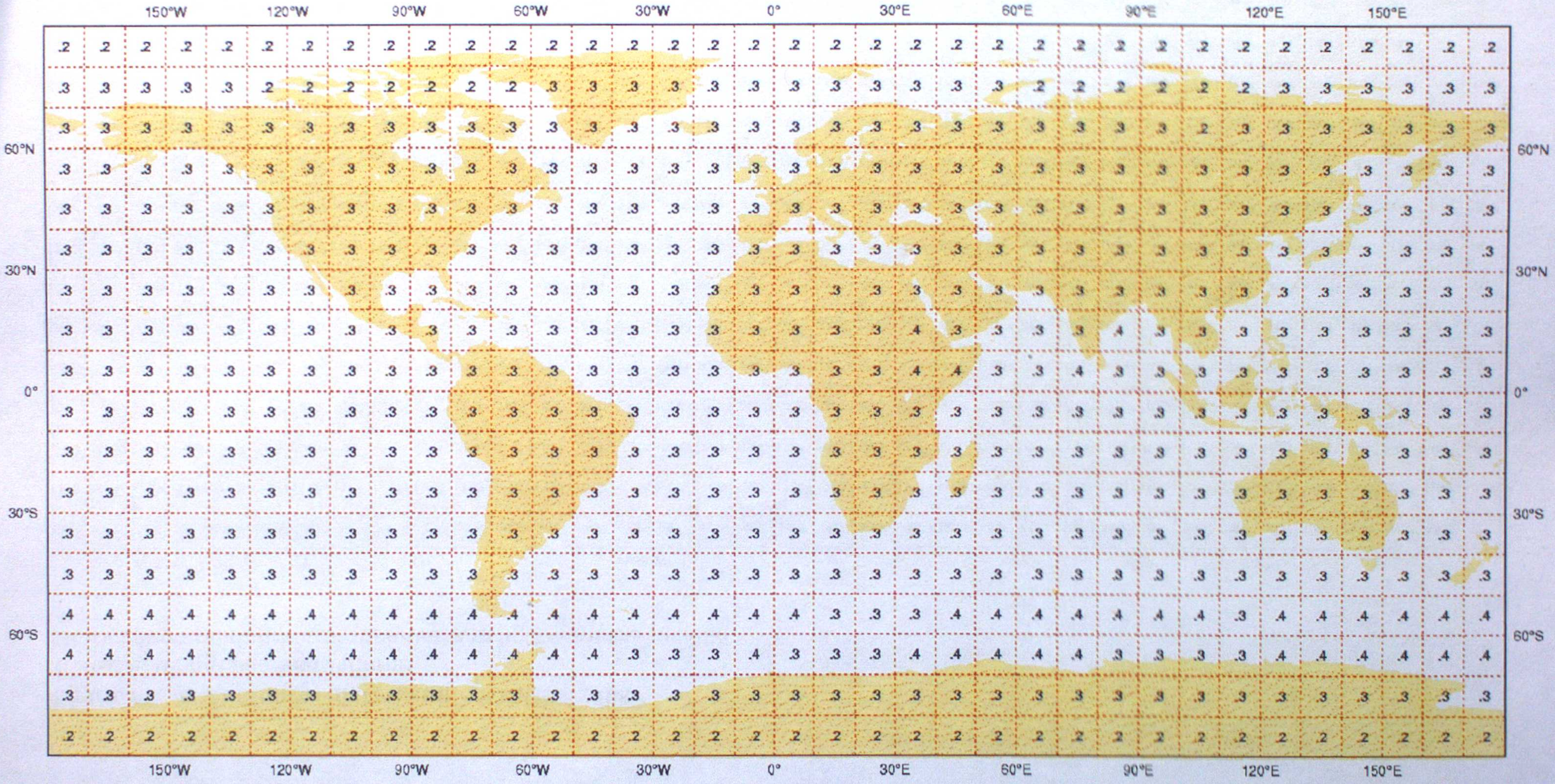

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4
.5 .4 .4 .5 .5 .5 .5 .5 .4 .4 .4 .4 .4 .5 .5 .5 .4 .4 .4 .4 .5 .5 .5 .5 .5 .5 .4 .4 .4 .4 .5 .5 .5 .5 .5 .5
.5 .5 .4 .4 .4 .4 .5 .5 .5 .4 .4 .4 .4 .4 .5 .4 .5 .4 .4 .4 .4 .5 .5 .4 .5 .5 .4 .4 .4 .4 .5 .5 .5 .5 .5 .4
.4 .4 .4 .4 .4 .4 .5 .5 .5 .5 .4 .4 .4 .5 .4 .4 .4 .4 .4 .4 .4 .4 .5 .5 .5 .5 .5 .5 .5 .4 .5 .5 .5 .5 .5 .4
.4 .4 .4 .4 .4 .5 .4 .5 .5 .5 .5 .4 .4 .5 .4 .4 .4 .4 .5 .4 .4 .4 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .4 .4
.5 .4 .4 .4 .5 .5 .5 .5 .5 .5 .5 .4 .4 .5 .4 .5 .5 .5 .5 .4 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .4 .5
.5 .4 .5 .4 .5 .5 .5 .5 .5 .5 .5 .4 .4 .4 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5
.5 .4 .4 .4 .5 .4 .4 .5 .5 .5 .5 .4 .4 .4 .5 .4 .5 .4 .5 .5 .4 .4 .5 .4 .5 .5 .5 .5 .5 .5 .4 .5 .5 .5 .4 .4
.5 .4 .4 .4 .5 .4 .4 .4 .4 .5 .5 .4 .4 .4 .5 .4 .4 .4 .4 .5 .4 .4 .4 .5 .5 .4 .5 .5 .4 .5 .4 .5 .5 .5 .5 .4
.5 .5 .4 .4 .4 .4 .5 .4 .4 .4 .4 .5 .4 .4 .5 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .5 .4 .4 .4 .4 .5 .4
.4 .5 .4 .4 .4 .4 .5 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .3 .4 .3 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4
.5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .4 .5 .5

Figure 38. ATOVS MEAN O-B brightness temperature differences (deg C). AUGUST 2006
Channel: AMSUA-9 (100 hPa)
NOAA15, using all observations



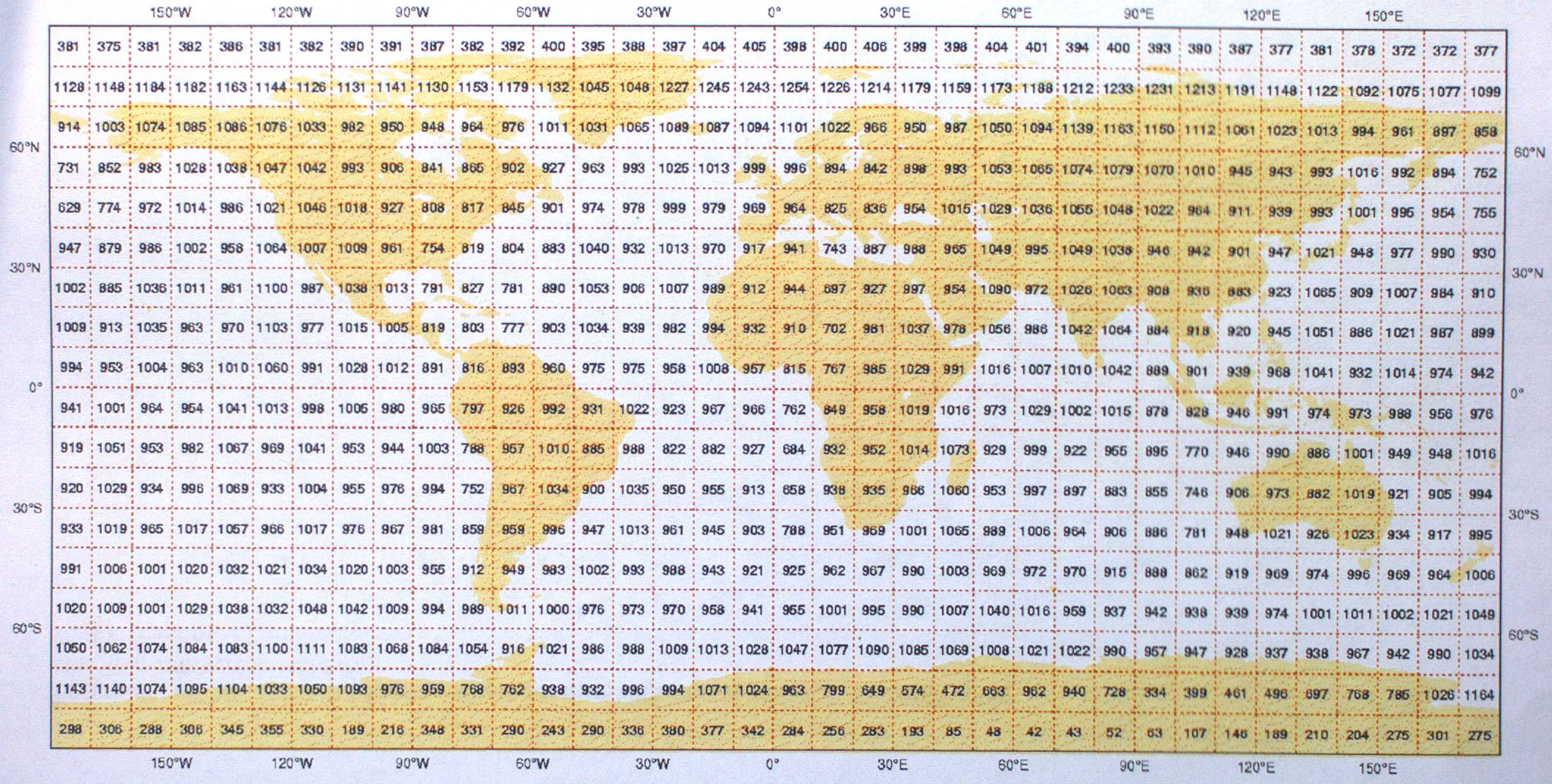
.4	.4	.4	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4
.5	.5	.5	.5	.5	.5	.5	.5	.4	.4	.5	.5	.5	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.5	.5	.5	.5	.5	.5	.5	.5	.4	.5	.5	.5	.5
.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.2	.2	.2	.3	.3	.3	.4	.4	.5	.5	.5	.5	.4	.4	.4	.3	.3	.3	.4
.2	.2	.2	.2	.2	.3	.2	.2	.3	.3	.3	.3	.3	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.3	.3	.4	.4	.4	.3	.3	.2	.2	.2	.2	.2	.2
.1	.1	.1	.1	.1	.1	.0	.0	.0	.0	.1	.1	.1	.0	.0	.0	.0	.0	.0	.1	.1	.0	.1	.1	.2	.2	.2	.1	.1	.1	.0	.0	.0	.0	.1	.1
.0	.0	.0	.0	.0	-.1	-.1	-.2	-.2	-.2	-.1	-.1	-.1	-.1	-.1	-.2	-.2	-.2	-.1	-.1	-.2	-.2	-.2	-.2	-.2	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	.0	.0	.0
-.1	-.1	-.1	-.2	-.2	-.2	-.3	-.2	-.1	-.1	-.1	-.1	-.2	-.3	-.2	-.2	-.2	-.1	-.2	-.2	-.3	-.3	-.3	-.3	-.3	-.3	-.2	-.2	-.2	-.1	-.1	-.2	-.2	-.2	-.1	-.1
-.3	-.3	-.3	-.3	-.3	-.4	-.3	-.3	-.2	-.2	-.2	-.2	-.3	-.3	-.4	-.4	-.3	-.3	-.3	-.2	-.4	-.4	-.3	-.3	-.3	-.3	-.2	-.2	-.3	-.2	-.2	-.3	-.3	-.3	-.2	-.2
-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.3	-.2	-.2	-.4	-.3	-.3	-.3	-.4	-.4	-.4	-.3	-.4	-.4	-.5	-.4	-.4	-.5	-.4	-.3	-.2	-.2	-.3	-.2	-.3	-.3	-.3	-.3	-.3	-.4
-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.3	-.3	-.2	-.3	-.3	-.2	-.3	-.3	-.4	-.4	-.4	-.4	-.4	-.5	-.5	-.6	-.6	-.4	-.3	-.3	-.3	-.3	-.3	-.3	-.4	-.3	-.3	-.3	-.4
-.4	-.4	-.4	-.4	-.4	-.4	-.3	-.3	-.3	-.3	-.3	-.3	-.3	-.3	-.3	-.3	-.4	-.3	-.3	-.2	-.2	-.3	-.4	-.5	-.4	-.3	-.3	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4
-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.3	-.3	-.3	-.3	-.3	-.3	-.2	-.1	-.2	-.2	-.3	-.3	-.2	-.2	-.2	-.3	-.3	-.3	-.3	-.3	-.3	-.2	-.2
.1	.1	.1	.1	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	-.1	-.1	-.1	-.1	-.1	-.1	.0	.0	-.1	-.1	-.1	.0	.1	.1	.1	.0	.0	-.1	.0	.0	.0	.1
.2	.2	.3	.3	.3	.2	.2	.2	.1	.1	.1	.1	.1	.0	-.1	.0	.0	.0	.0	.0	.1	.1	.0	.0	.0	.0	.1	.1	.2	.1	.1	.1	.0	.0	.1	.1
-.1	.0	.0	.1	.1	.1	.0	.0	.0	-.1	-.1	-.2	-.2	-.3	-.4	-.4	-.3	-.2	-.2	-.1	-.1	-.1	-.1	-.2	-.3	-.3	-.3	-.3	-.2	-.1	-.1	-.1	-.2	-.2	-.2	-.1
-.5	-.4	-.3	-.3	-.3	-.4	-.4	-.4	-.4	-.5	-.5	-.5	-.6	-.6	-.7	-.7	-.7	-.6	-.6	-.5	-.5	-.5	-.5	-.6	-.6	-.6	-.7	-.6	-.6	-.5	-.5	-.5	-.6	-.6	-.6	-.6
-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.8	-.8	-.8	-.8	-.8	-.8	-.8	-.8	-.8	-.8	-.8	-.8	-.8	-.8	-.8	-.9	-.9	-.9	-.9	-.9	-.9	-.9	-.8	-.8	-.8	-.8	-.8	-.8
-.6	-.6	-.6	-.6	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.8	-.8	-.8	-.8	-.8	-.8	-.8	-.8	-.8	-.8	-.8	-.8	-.8	-.8	-.7	-.7	-.7	-.6	-.6

Figure 39. ATOVS SD O-B brightness temperature differences (deg C). AUGUST 2006
Channel: AMSUA-9 (100 hPa)
NOAA15, using all observations



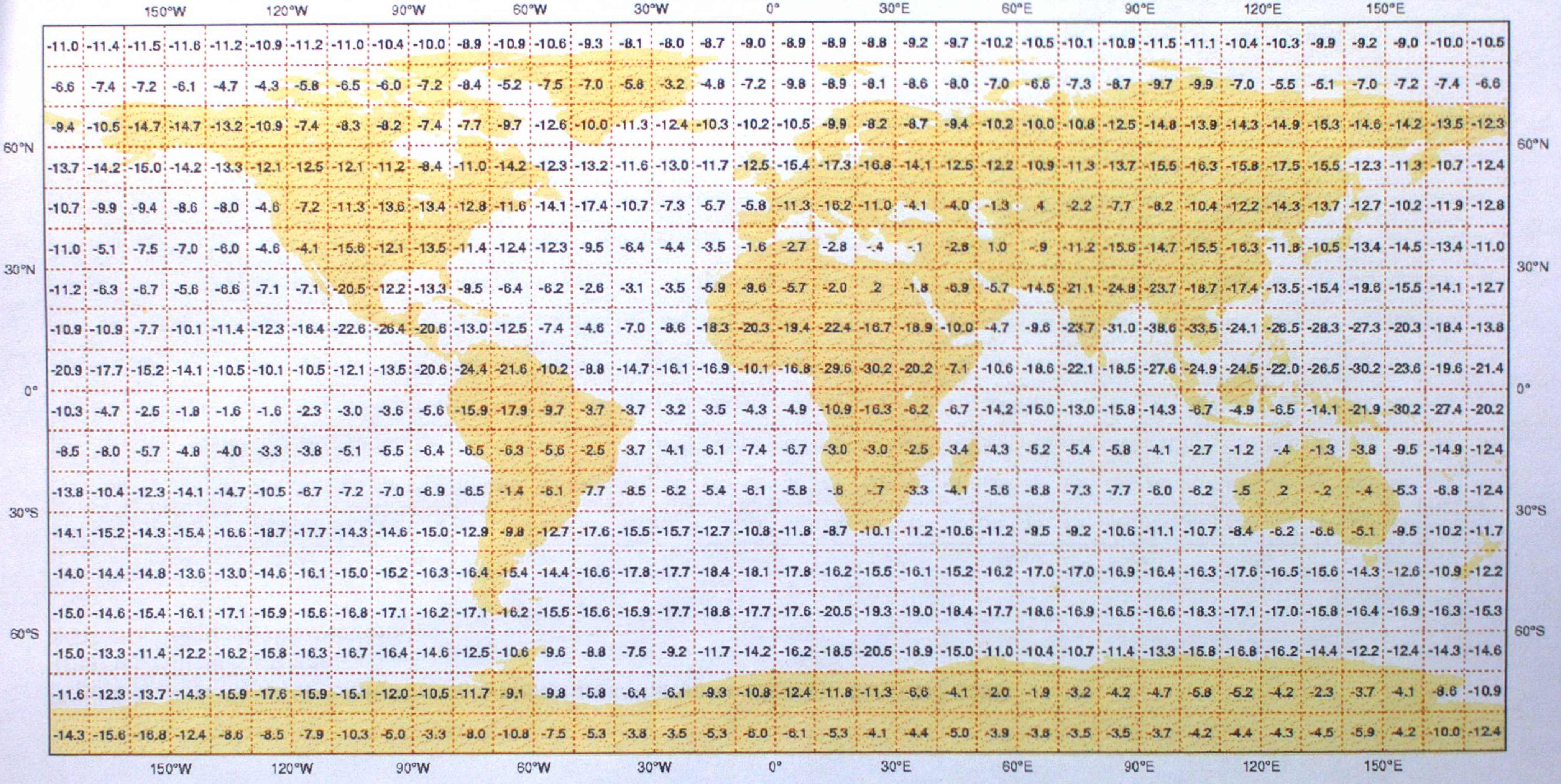
.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2
.3	.3	.3	.3	.3	.2	.2	.2	.2	.2	.2	.2	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.2	.2	.2	.2	.2	.2	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.2	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3	.3	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.3	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.3	.4	.4	.4	.4	.4	.4
.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.4	.3	.3	.3	.4	.4	.4	.4	.4	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2

Figure 40. ATOVS mean daily count. AUGUST 2006
NOAA16, using all observations
Global average number of observations in 24 hours = 583424



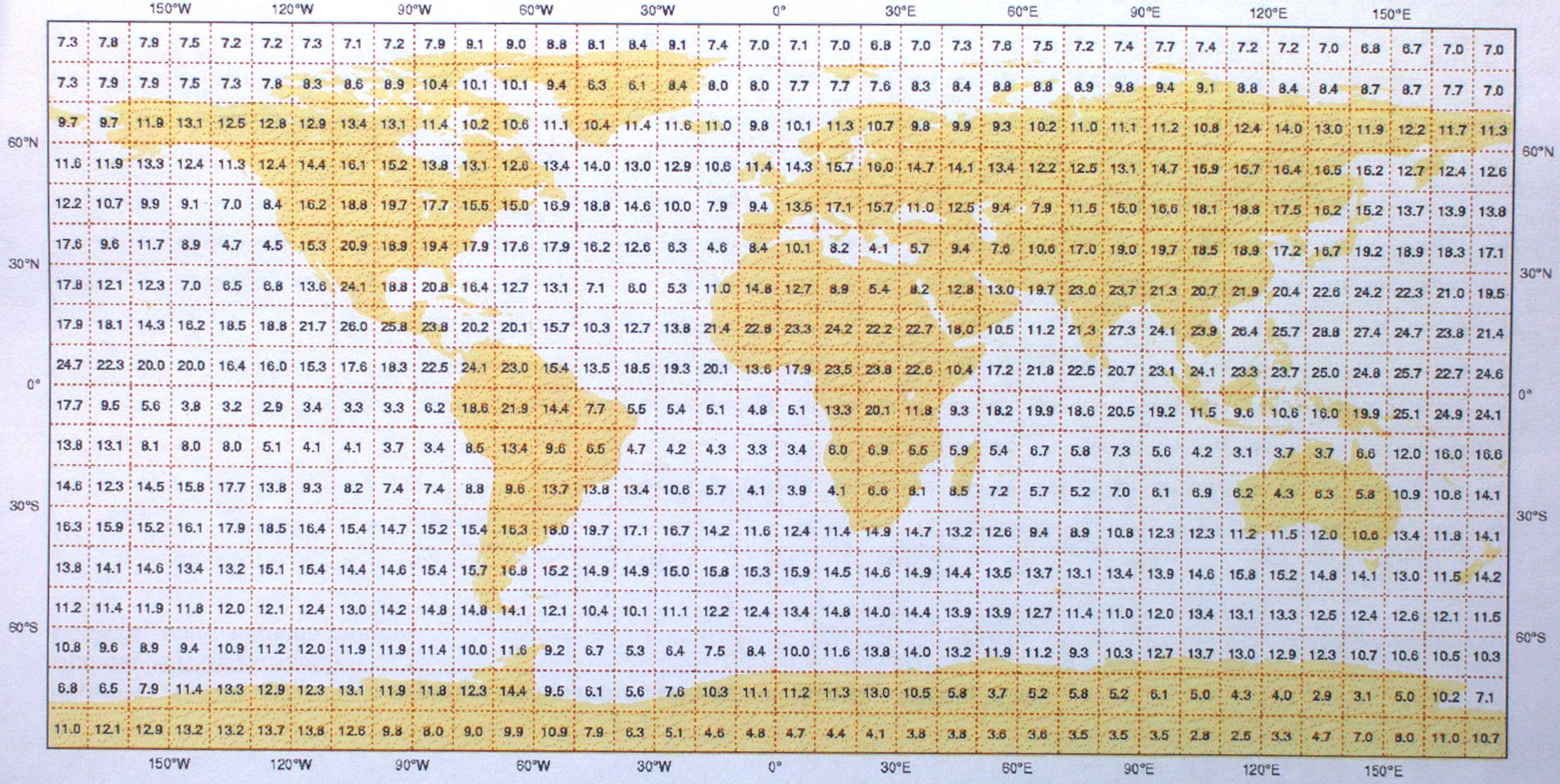
381	375	381	382	386	381	382	390	391	387	382	392	400	395	388	397	404	405	398	400	406	399	398	404	401	394	400	393	390	387	377	381	378	372	372	377
1128	1148	1184	1182	1163	1144	1126	1131	1141	1130	1153	1179	1132	1045	1048	1227	1245	1243	1254	1226	1214	1179	1159	1173	1188	1212	1233	1231	1213	1191	1148	1122	1092	1075	1077	1099
914	1003	1074	1085	1086	1076	1033	982	950	948	964	976	1011	1031	1065	1089	1087	1094	1101	1022	966	950	987	1050	1094	1139	1163	1150	1112	1061	1023	1013	994	961	897	858
731	852	983	1028	1038	1047	1042	993	906	841	865	902	927	963	993	1025	1013	999	996	894	842	898	993	1053	1065	1074	1079	1070	1010	945	943	993	1016	992	894	752
629	774	972	1014	986	1021	1046	1018	927	808	817	845	901	974	978	999	979	969	964	825	836	954	1015	1029	1036	1055	1048	1022	964	911	939	993	1001	995	954	755
947	879	986	1002	958	1064	1007	1009	961	754	819	804	883	1040	932	1013	970	917	941	743	887	988	965	1049	995	1049	1038	946	942	901	947	1021	948	977	990	930
1002	885	1036	1011	961	1100	987	1038	1013	791	827	781	890	1053	906	1007	989	912	944	697	927	997	954	1090	972	1026	1063	908	936	883	923	1065	909	1007	984	910
1009	913	1035	963	970	1103	977	1015	1005	819	803	777	903	1034	939	982	994	932	910	702	981	1037	978	1056	986	1042	1064	884	918	920	945	1051	886	1021	987	899
994	953	1004	963	1010	1060	991	1028	1012	891	816	893	960	975	975	958	1008	957	815	767	985	1029	991	1016	1007	1010	1042	889	901	939	968	1041	932	1014	974	942
941	1001	964	954	1041	1013	998	1005	980	965	797	926	992	931	1022	923	967	966	762	849	958	1019	1016	973	1029	1002	1015	878	828	946	991	974	973	988	956	976
919	1051	953	982	1067	969	1041	953	944	1003	788	957	1010	885	988	822	882	927	684	932	952	1014	1073	929	999	922	955	895	770	946	990	886	1001	949	948	1016
920	1029	934	996	1069	933	1004	955	976	994	752	967	1034	900	1035	950	955	913	658	938	935	966	1060	953	997	897	883	855	746	906	973	882	1019	921	905	994
933	1019	965	1017	1057	966	1017	976	967	981	859	959	996	947	1013	961	945	903	788	951	969	1001	1065	989	1006	964	906	886	781	948	1021	926	1023	934	917	995
991	1006	1001	1020	1032	1021	1034	1020	1003	955	912	949	983	1002	993	988	943	921	925	962	967	990	1003	969	972	970	915	888	862	919	969	974	996	969	964	1006
1020	1009	1001	1029	1038	1032	1048	1042	1009	994	989	1011	1000	976	973	970	958	941	955	1001	995	990	1007	1040	1016	959	937	942	938	939	974	1001	1011	1002	1021	1049
1050	1062	1074	1084	1083	1100	1111	1083	1068	1084	1054	916	1021	986	988	1009	1013	1028	1047	1077	1090	1085	1069	1008	1021	1022	990	957	947	928	937	938	967	942	990	1034
1143	1140	1074	1095	1104	1033	1050	1093	976	959	768	762	938	932	996	994	1071	1024	963	799	649	574	472	663	962	940	728	334	399	461	496	697	768	785	1026	1164
298	306	288	306	345	355	330	189	216	348	331	290	243	290	336	380	377	342	284	256	283	193	85	48	42	43	52	63	107	146	189	210	204	275	301	275

Figure 41. ATOVS MEAN O-B brightness temperature differences (deg C). AUGUST 2006
Channel: HIRS8 (Surface)
NOAA16, using all observations



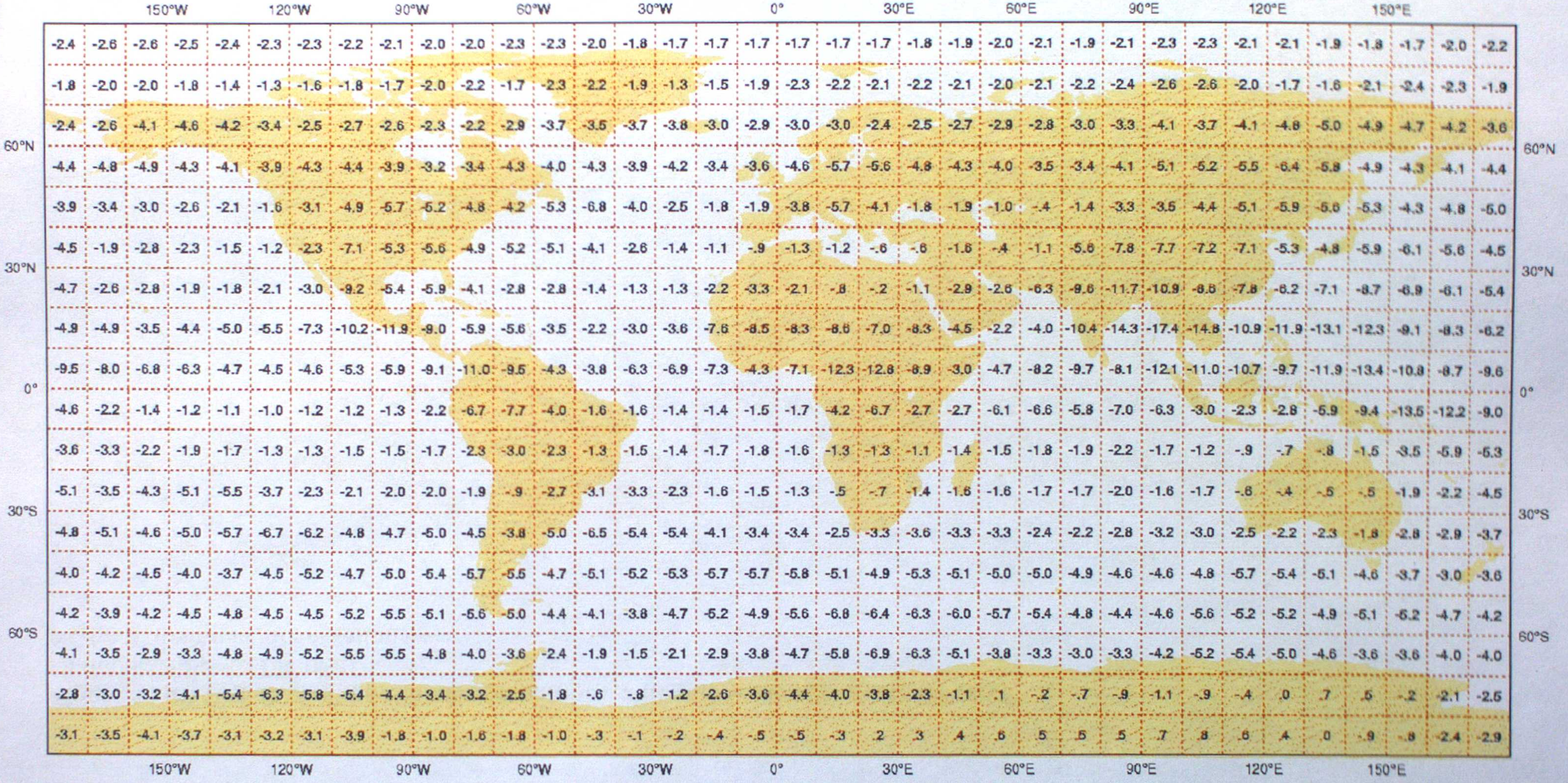
-11.0	-11.4	-11.5	-11.6	-11.2	-10.9	-11.2	-11.0	-10.4	-10.0	-8.9	-10.9	-10.6	-9.3	-8.1	-8.0	-8.7	-9.0	-8.9	-8.9	-8.8	-9.2	-9.7	-10.2	-10.5	-10.1	-10.9	-11.5	-11.1	-10.4	-10.3	-9.9	-9.2	-9.0	-10.0	-10.5
-6.6	-7.4	-7.2	-6.1	-4.7	-4.3	-5.8	-6.5	-6.0	-7.2	-8.4	-5.2	-7.5	-7.0	-5.8	-3.2	-4.8	-7.2	-9.8	-8.9	-8.1	-8.6	-8.0	-7.0	-6.6	-7.3	-8.7	-9.7	-9.9	-7.0	-5.5	-5.1	-7.0	-7.2	-7.4	-6.6
-9.4	-10.5	-14.7	-14.7	-13.2	-10.9	-7.4	-8.3	-8.2	-7.4	-7.7	-9.7	-12.6	-10.0	-11.3	-12.4	-10.3	-10.2	-10.5	-9.9	-8.2	-8.7	-9.4	-10.2	-10.0	-10.8	-12.5	-14.8	-13.9	-14.3	-14.9	-15.3	-14.6	-14.2	-13.5	-12.3
-13.7	-14.2	-15.0	-14.2	-13.3	-12.1	-12.5	-12.1	-11.2	-8.4	-11.0	-14.2	-12.3	-13.2	-11.6	-13.0	-11.7	-12.5	-15.4	-17.3	-16.8	-14.1	-12.5	-12.2	-10.9	-11.3	-13.7	-15.5	-16.3	-15.8	-17.5	-15.5	-12.3	-11.3	-10.7	-12.4
-10.7	-9.9	-9.4	-8.6	-8.0	-4.6	-7.2	-11.3	-13.6	-13.4	-12.8	-11.6	-14.1	-17.4	-10.7	-7.3	-5.7	-5.8	-11.3	-16.2	-11.0	-4.1	-4.0	-1.3	.4	-2.2	-7.7	-8.2	-10.4	-12.2	-14.3	-13.7	-12.7	-10.2	-11.9	-12.8
-11.0	-5.1	-7.5	-7.0	-6.0	-4.6	-4.1	-15.6	-12.1	-13.5	-11.4	-12.4	-12.3	-9.5	-6.4	-4.4	-3.5	-1.6	-2.7	-2.8	-.4	-.1	-2.8	1.0	-.9	-11.2	-15.6	-14.7	-15.5	-16.3	-11.8	-10.5	-13.4	-14.5	-13.4	-11.0
-11.2	-6.3	-6.7	-5.6	-6.6	-7.1	-7.1	-20.5	-12.2	-13.3	-9.5	-6.4	-6.2	-2.6	-3.1	-3.5	-5.9	-8.6	-5.7	-2.0	.2	-1.8	-6.9	-5.7	-14.5	-21.1	-24.8	-23.7	-18.7	-17.4	-13.5	-15.4	-19.6	-15.5	-14.1	-12.7
-10.9	-10.9	-7.7	-10.1	-11.4	-12.3	-16.4	-22.6	-26.4	-20.6	-13.0	-12.5	-7.4	-4.6	-7.0	-8.6	-18.3	-20.3	-19.4	-22.4	-16.7	-18.9	-10.0	-4.7	-9.6	-23.7	-31.0	-38.6	-33.5	-24.1	-26.5	-28.3	-27.3	-20.3	-18.4	-13.8
-20.9	-17.7	-15.2	-14.1	-10.5	-10.1	-10.5	-12.1	-13.5	-20.6	-24.4	-21.6	-10.2	-8.8	-14.7	-16.1	-16.9	-10.1	-16.8	-29.6	-30.2	-20.2	-7.1	-10.6	-18.6	-22.1	-18.5	-27.6	-24.9	-24.5	-22.0	-26.5	-30.2	-23.6	-19.6	-21.4
-10.3	-4.7	-2.5	-1.8	-1.6	-1.6	-2.3	-3.0	-3.6	-5.6	-15.9	-17.9	-9.7	-3.7	-3.7	-3.2	-3.5	-4.3	-4.9	-10.9	-16.3	-6.2	-6.7	-14.2	-15.0	-13.0	-15.8	-14.3	-6.7	-4.9	-6.5	-14.1	-21.9	-30.2	-27.4	-20.2
-8.5	-8.0	-5.7	-4.8	-4.0	-3.3	-3.8	-5.1	-5.5	-6.4	-6.5	-6.3	-5.6	-2.5	-3.7	-4.1	-6.1	-7.4	-6.7	-3.0	-3.0	-2.5	-3.4	-4.3	-5.2	-5.4	-5.8	-4.1	-2.7	-1.2	-.4	-1.3	-3.8	-9.5	-14.9	-12.4
-13.8	-10.4	-12.3	-14.1	-14.7	-10.5	-6.7	-7.2	-7.0	-6.9	-6.5	-1.4	-6.1	-7.7	-8.5	-6.2	-5.4	-6.1	-5.8	-.8	-.7	-3.3	-4.1	-5.6	-6.8	-7.3	-7.7	-6.0	-6.2	-.5	.2	-.2	-.4	-5.3	-6.8	-12.4
-14.1	-15.2	-14.3	-15.4	-16.6	-18.7	-17.7	-14.3	-14.6	-15.0	-12.9	-9.8	-12.7	-17.6	-15.5	-15.7	-12.7	-10.8	-11.8	-8.7	-10.1	-11.2	-10.6	-11.2	-9.5	-9.2	-10.6	-11.1	-10.7	-8.4	-6.2	-6.6	-5.1	-9.5	-10.2	-11.7
-14.0	-14.4	-14.8	-13.6	-13.0	-14.6	-16.1	-15.0	-15.2	-16.3	-16.4	-15.4	-14.4	-16.6	-17.8	-17.7	-18.4	-18.1	-17.8	-16.2	-15.5	-16.1	-15.2	-16.2	-17.0	-17.0	-16.9	-16.4	-16.3	-17.6	-16.5	-15.6	-14.3	-12.6	-10.9	-12.2
-15.0	-14.6	-15.4	-16.1	-17.1	-15.9	-15.6	-16.8	-17.1	-16.2	-17.1	-16.2	-15.5	-15.6	-15.9	-17.7	-18.8	-17.7	-17.6	-20.5	-19.3	-19.0	-18.4	-17.7	-18.6	-16.9	-16.5	-16.6	-18.3	-17.1	-17.0	-15.8	-16.4	-16.9	-16.3	-15.3
-15.0	-13.3	-11.4	-12.2	-16.2	-15.8	-16.3	-16.7	-16.4	-14.6	-12.5	-10.6	-9.6	-8.8	-7.5	-9.2	-11.7	-14.2	-16.2	-18.5	-20.5	-18.9	-15.0	-11.0	-10.4	-10.7	-11.4	-13.3	-15.8	-16.8	-16.2	-14.4	-12.2	-12.4	-14.3	-14.6
-11.6	-12.3	-13.7	-14.3	-15.9	-17.6	-15.9	-15.1	-12.0	-10.5	-11.7	-9.1	-9.8	-5.8	-6.4	-6.1	-9.3	-10.8	-12.4	-11.8	-11.3	-6.6	-4.1	-2.0	-1.9	-3.2	-4.2	-4.7	-5.8	-5.2	-4.2	-2.3	-3.7	-4.1	-8.6	-10.9
-14.3	-15.6	-16.8	-12.4	-8.6	-8.5	-7.9	-10.3	-5.0	-3.3	-8.0	-10.8	-7.5	-5.3	-3.8	-3.5	-5.3	-6.0	-6.1	-5.3	-4.1	-4.4	-5.0	-3.9	-3.8	-3.5	-3.5	-3.7	-4.2	-4.4	-4.3	-4.5	-5.9	-4.2	-10.0	-12.4

Figure 42. ATOVS SD O-B brightness temperature differences (deg C). AUGUST 2006
Channel: HIRS8 (Surface)
NOAA16, using all observations



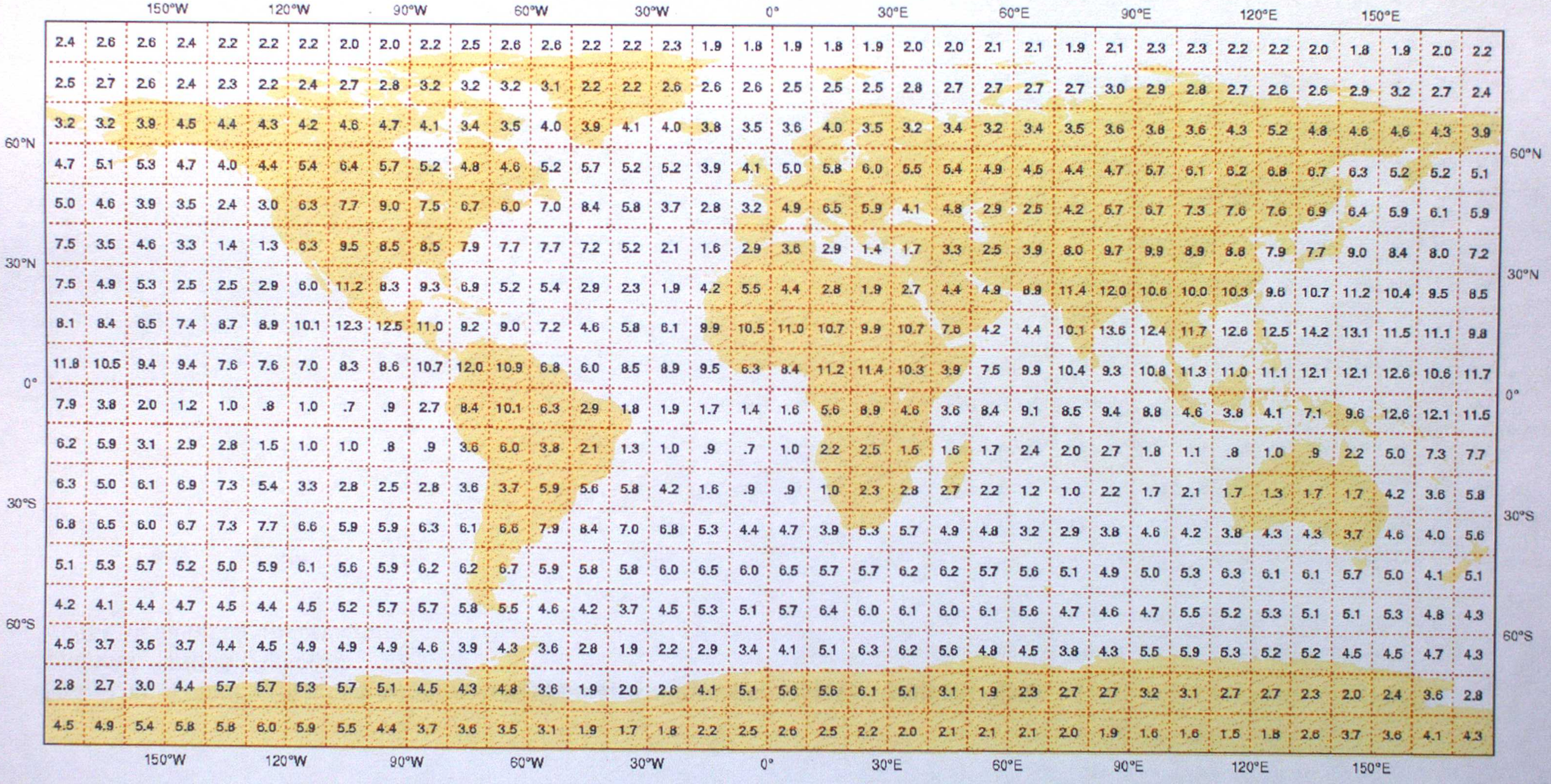
7.3	7.8	7.9	7.5	7.2	7.2	7.3	7.1	7.2	7.9	9.1	9.0	8.8	8.1	8.4	9.1	7.4	7.0	7.1	7.0	6.8	7.0	7.3	7.6	7.5	7.2	7.4	7.7	7.4	7.2	7.2	7.0	6.8	6.7	7.0	7.0
7.3	7.9	7.9	7.5	7.3	7.8	8.3	8.6	8.9	10.4	10.1	10.1	9.4	6.3	6.1	8.4	8.0	8.0	7.7	7.7	7.6	8.3	8.4	8.8	8.8	8.9	9.8	9.4	9.1	8.8	8.4	8.4	8.7	8.7	7.7	7.0
9.7	9.7	11.9	13.1	12.5	12.8	12.9	13.4	13.1	11.4	10.2	10.6	11.1	10.4	11.4	11.6	11.0	9.8	10.1	11.3	10.7	9.8	9.9	9.3	10.2	11.0	11.1	11.2	10.8	12.4	14.0	13.0	11.9	12.2	11.7	11.3
11.6	11.9	13.3	12.4	11.3	12.4	14.4	16.1	15.2	13.8	13.1	12.6	13.4	14.0	13.0	12.9	10.6	11.4	14.3	15.7	16.0	14.7	14.1	13.4	12.2	12.5	13.1	14.7	16.9	15.7	16.4	16.5	15.2	12.7	12.4	12.6
12.2	10.7	9.9	9.1	7.0	8.4	16.2	18.8	19.7	17.7	15.5	15.0	16.9	18.8	14.6	10.0	7.9	9.4	13.5	17.1	15.7	11.0	12.5	9.4	7.9	11.5	15.0	16.6	18.1	18.8	17.5	16.2	15.2	13.7	13.9	13.8
17.6	9.6	11.7	8.9	4.7	4.5	15.3	20.9	18.9	19.4	17.9	17.6	17.9	16.2	12.6	6.3	4.6	8.4	10.1	8.2	4.1	5.7	9.4	7.6	10.6	17.0	19.0	19.7	18.5	18.9	17.2	16.7	19.2	18.9	18.3	17.1
17.8	12.1	12.3	7.0	6.5	6.8	13.6	24.1	18.8	20.8	16.4	12.7	13.1	7.1	6.0	5.3	11.0	14.8	12.7	8.9	5.4	8.2	12.8	13.0	19.7	23.0	23.7	21.3	20.7	21.9	20.4	22.6	24.2	22.3	21.0	19.5
17.9	18.1	14.3	16.2	18.5	18.8	21.7	26.0	25.8	23.8	20.2	20.1	15.7	10.3	12.7	13.8	21.4	22.8	23.3	24.2	22.2	22.7	18.0	10.5	11.2	21.3	27.3	24.1	23.9	26.4	25.7	28.8	27.4	24.7	23.8	21.4
24.7	22.3	20.0	20.0	16.4	16.0	15.3	17.6	18.3	22.5	24.1	23.0	15.4	13.5	18.5	19.3	20.1	13.6	17.9	23.5	23.8	22.6	10.4	17.2	21.8	22.5	20.7	23.1	24.1	23.3	23.7	25.0	24.8	25.7	22.7	24.6
17.7	9.5	5.6	3.8	3.2	2.9	3.4	3.3	3.3	6.2	18.6	21.9	14.4	7.7	5.5	5.4	5.1	4.8	5.1	13.3	20.1	11.8	9.3	18.2	19.9	18.6	20.5	19.2	11.5	9.6	10.6	16.0	19.9	25.1	24.9	24.1
13.8	13.1	8.1	8.0	8.0	5.1	4.1	4.1	3.7	3.4	8.5	13.4	9.6	6.5	4.7	4.2	4.3	3.3	3.4	6.0	6.9	5.5	5.9	5.4	6.7	5.8	7.3	5.6	4.2	3.1	3.7	3.7	6.6	12.0	16.0	16.6
14.6	12.3	14.5	15.8	17.7	13.8	9.3	8.2	7.4	7.4	8.8	9.6	13.7	13.8	13.4	10.6	5.7	4.1	3.9	4.1	6.6	8.1	8.5	7.2	5.7	5.2	7.0	6.1	6.9	6.2	4.3	6.3	5.8	10.9	10.6	14.1
16.3	15.9	15.2	16.1	17.9	18.5	16.4	15.4	14.7	15.2	15.4	16.3	18.0	19.7	17.1	16.7	14.2	11.6	12.4	11.4	14.9	14.7	13.2	12.6	9.4	8.9	10.8	12.3	12.3	11.2	11.5	12.0	10.6	13.4	11.8	14.1
13.8	14.1	14.6	13.4	13.2	15.1	15.4	14.4	14.6	15.4	15.7	16.8	15.2	14.9	14.9	15.0	15.8	15.3	15.9	14.5	14.6	14.9	14.4	13.5	13.7	13.1	13.4	13.9	14.6	15.8	15.2	14.8	14.1	13.0	11.5	14.2
11.2	11.4	11.9	11.8	12.0	12.1	12.4	13.0	14.2	14.8	14.8	14.1	12.1	10.4	10.1	11.1	12.2	12.4	13.4	14.8	14.0	14.4	13.9	13.9	12.7	11.4	11.0	12.0	13.4	13.1	13.3	12.5	12.4	12.6	12.1	11.5
10.8	9.6	8.9	9.4	10.9	11.2	12.0	11.9	11.9	11.4	10.0	11.6	9.2	6.7	5.3	6.4	7.5	8.4	10.0	11.6	13.8	14.0	13.2	11.9	11.2	9.3	10.3	12.7	13.7	13.0	12.9	12.3	10.7	10.6	10.5	10.3
6.8	6.5	7.9	11.4	13.3	12.9	12.3	13.1	11.9	11.8	12.3	14.4	9.5	6.1	5.6	7.6	10.3	11.1	11.2	11.3	13.0	10.5	5.8	3.7	5.2	5.8	5.2	6.1	5.0	4.3	4.0	2.9	3.1	5.0	10.2	7.1
11.0	12.1	12.9	13.2	13.2	13.7	13.8	12.6	9.8	8.0	9.0	9.9	10.9	7.9	6.3	5.1	4.6	4.8	4.7	4.4	4.1	3.8	3.8	3.6	3.6	3.5	3.5	3.5	2.8	2.5	3.3	4.7	7.0	8.0	11.0	10.7

Figure 43. ATOVS MEAN O-B brightness temperature differences (deg C). AUGUST 2006
Channel: HIRS15 (700 hPa)
NOAA16, using all observations



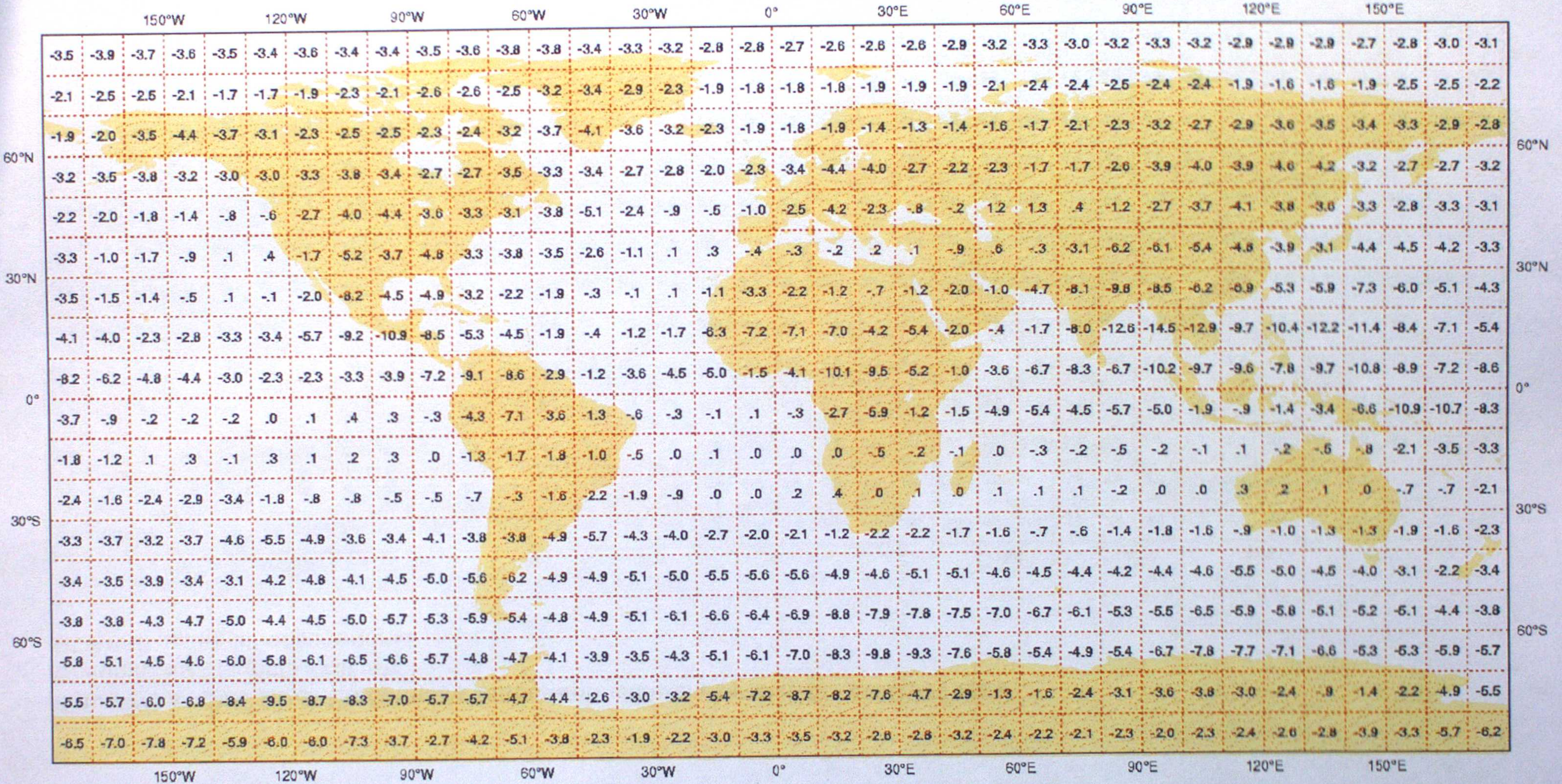
-2.4	-2.6	-2.6	-2.5	-2.4	-2.3	-2.3	-2.2	-2.1	-2.0	-2.0	-2.3	-2.3	-2.0	-1.8	-1.7	-1.7	-1.7	-1.7	-1.7	-1.7	-1.8	-1.9	-2.0	-2.1	-1.9	-2.1	-2.3	-2.3	-2.1	-2.1	-1.9	-1.8	-1.7	-2.0	-2.2
-1.8	-2.0	-2.0	-1.8	-1.4	-1.3	-1.6	-1.8	-1.7	-2.0	-2.2	-1.7	-2.3	-2.2	-1.9	-1.3	-1.5	-1.9	-2.3	-2.2	-2.1	-2.2	-2.1	-2.0	-2.1	-2.2	-2.4	-2.6	-2.6	-2.0	-1.7	-1.6	-2.1	-2.4	-2.3	-1.9
-2.4	-2.6	-4.1	-4.6	-4.2	-3.4	-2.5	-2.7	-2.6	-2.3	-2.2	-2.9	-3.7	-3.5	-3.7	-3.8	-3.0	-2.9	-3.0	-3.0	-2.4	-2.5	-2.7	-2.9	-2.8	-3.0	-3.3	-4.1	-3.7	-4.1	-4.8	-5.0	-4.9	-4.7	-4.2	-3.6
-4.4	-4.8	-4.9	-4.3	-4.1	-3.9	-4.3	-4.4	-3.9	-3.2	-3.4	-4.3	-4.0	-4.3	-3.9	-4.2	-3.4	-3.6	-4.6	-5.7	-5.6	-4.8	-4.3	-4.0	-3.5	-3.4	-4.1	-5.1	-5.2	-5.5	-6.4	-5.8	-4.9	-4.3	-4.1	-4.4
-3.9	-3.4	-3.0	-2.6	-2.1	-1.6	-3.1	-4.9	-5.7	-5.2	-4.8	-4.2	-5.3	-6.8	-4.0	-2.5	-1.8	-1.9	-3.8	-5.7	-4.1	-1.8	-1.9	-1.0	-.4	-1.4	-3.3	-3.5	-4.4	-5.1	-5.9	-5.6	-5.3	-4.3	-4.8	-5.0
-4.5	-1.9	-2.8	-2.3	-1.5	-1.2	-2.3	-7.1	-5.3	-5.6	-4.9	-5.2	-5.1	-4.1	-2.6	-1.4	-1.1	-.9	-1.3	-1.2	-.6	-.6	-1.6	-.4	-1.1	-5.6	-7.8	-7.7	-7.2	-7.1	-5.3	-4.8	-5.9	-6.1	-5.6	-4.5
-4.7	-2.6	-2.8	-1.9	-1.8	-2.1	-3.0	-9.2	-5.4	-5.9	-4.1	-2.8	-2.8	-1.4	-1.3	-1.3	-2.2	-3.3	-2.1	-.8	-.2	-1.1	-2.9	-2.6	-6.3	-9.6	-11.7	-10.9	-8.6	-7.8	-6.2	-7.1	-8.7	-6.9	-6.1	-5.4
-4.9	-4.9	-3.5	-4.4	-5.0	-5.5	-7.3	-10.2	-11.9	-9.0	-5.9	-5.6	-3.5	-2.2	-3.0	-3.6	-7.6	-8.5	-8.3	-8.6	-7.0	-8.3	-4.5	-2.2	-4.0	-10.4	-14.3	-17.4	-14.8	-10.9	-11.9	-13.1	-12.3	-9.1	-8.3	-6.2
-9.5	-8.0	-6.8	-6.3	-4.7	-4.5	-4.6	-5.3	-5.9	-9.1	-11.0	-9.5	-4.3	-3.8	-6.3	-6.9	-7.3	-4.3	-7.1	-12.3	-12.8	-8.9	-3.0	-4.7	-8.2	-9.7	-8.1	-12.1	-11.0	-10.7	-9.7	-11.9	-13.4	-10.8	-8.7	-9.6
-4.6	-2.2	-1.4	-1.2	-1.1	-1.0	-1.2	-1.2	-1.3	-2.2	-6.7	-7.7	-4.0	-1.6	-1.6	-1.4	-1.4	-1.5	-1.7	-4.2	-6.7	-2.7	-2.7	-6.1	-6.6	-5.8	-7.0	-6.3	-3.0	-2.3	-2.8	-5.9	-9.4	-13.5	-12.2	-9.0
-3.6	-3.3	-2.2	-1.9	-1.7	-1.3	-1.3	-1.5	-1.5	-1.7	-2.3	-3.0	-2.3	-1.3	-1.5	-1.4	-1.7	-1.8	-1.6	-1.3	-1.3	-1.1	-1.4	-1.5	-1.8	-1.9	-2.2	-1.7	-1.2	-.9	-.7	-.8	-1.5	-3.5	-5.9	-6.3
-5.1	-3.5	-4.3	-5.1	-5.5	-3.7	-2.3	-2.1	-2.0	-2.0	-1.9	-.9	-2.7	-3.1	-3.3	-2.3	-1.6	-1.5	-1.3	-.5	-.7	-1.4	-1.6	-1.6	-1.7	-1.7	-2.0	-1.6	-1.7	-.6	-.4	-.5	-.5	-1.9	-2.2	-4.5
-4.8	-5.1	-4.6	-5.0	-5.7	-6.7	-6.2	-4.8	-4.7	-5.0	-4.5	-3.8	-5.0	-6.5	-5.4	-5.4	-4.1	-3.4	-3.4	-2.5	-3.3	-3.6	-3.3	-3.3	-2.4	-2.2	-2.8	-3.2	-3.0	-2.5	-2.2	-2.3	-1.8	-2.8	-2.9	-3.7
-4.0	-4.2	-4.5	-4.0	-3.7	-4.5	-5.2	-4.7	-5.0	-5.4	-5.7	-5.5	-4.7	-5.1	-5.2	-5.3	-5.7	-5.7	-5.8	-5.1	-4.9	-5.3	-5.1	-5.0	-5.0	-4.9	-4.6	-4.6	-4.8	-5.7	-5.4	-5.1	-4.6	-3.7	-3.0	-3.6
-4.2	-3.9	-4.2	-4.5	-4.8	-4.5	-4.5	-5.2	-5.5	-5.1	-5.6	-5.0	-4.4	-4.1	-3.8	-4.7	-5.2	-4.9	-5.6	-6.8	-6.4	-6.3	-6.0	-5.7	-5.4	-4.8	-4.4	-4.6	-5.6	-5.2	-5.2	-4.9	-5.1	-6.2	-4.7	-4.2
-4.1	-3.5	-2.9	-3.3	-4.8	-4.9	-5.2	-5.5	-5.5	-4.8	-4.0	-3.6	-2.4	-1.9	-1.5	-2.1	-2.9	-3.8	-4.7	-5.8	-6.9	-6.3	-5.1	-3.8	-3.3	-3.0	-3.3	-4.2	-5.2	-5.4	-5.0	-4.6	-3.6	-3.6	-4.0	-4.0
-2.8	-3.0	-3.2	-4.1	-5.4	-6.3	-5.8	-5.4	-4.4	-3.4	-3.2	-2.5	-1.8	-.6	-.8	-1.2	-2.6	-3.6	-4.4	-4.0	-3.8	-2.3	-1.1	.1	-.2	-.7	-.9	-1.1	-.9	-.4	.0	.7	.5	-.2	-2.1	-2.5
-3.1	-3.5	-4.1	-3.7	-3.1	-3.2	-3.1	-3.9	-1.8	-1.0	-1.6	-1.8	-1.0	-.3	-.1	-.2	-.4	-.5	-.5	-.3	.2	.3	.4	.6	.5	.5	.5	.7	.8	.6	.4	0	-.9	-.8	-2.4	-2.9

Figure 44. ATOVS SD O-B brightness temperature differences (deg C). AUGUST 2006
Channel: HIRS15 (700 hPa)
NOAA16, using all observations



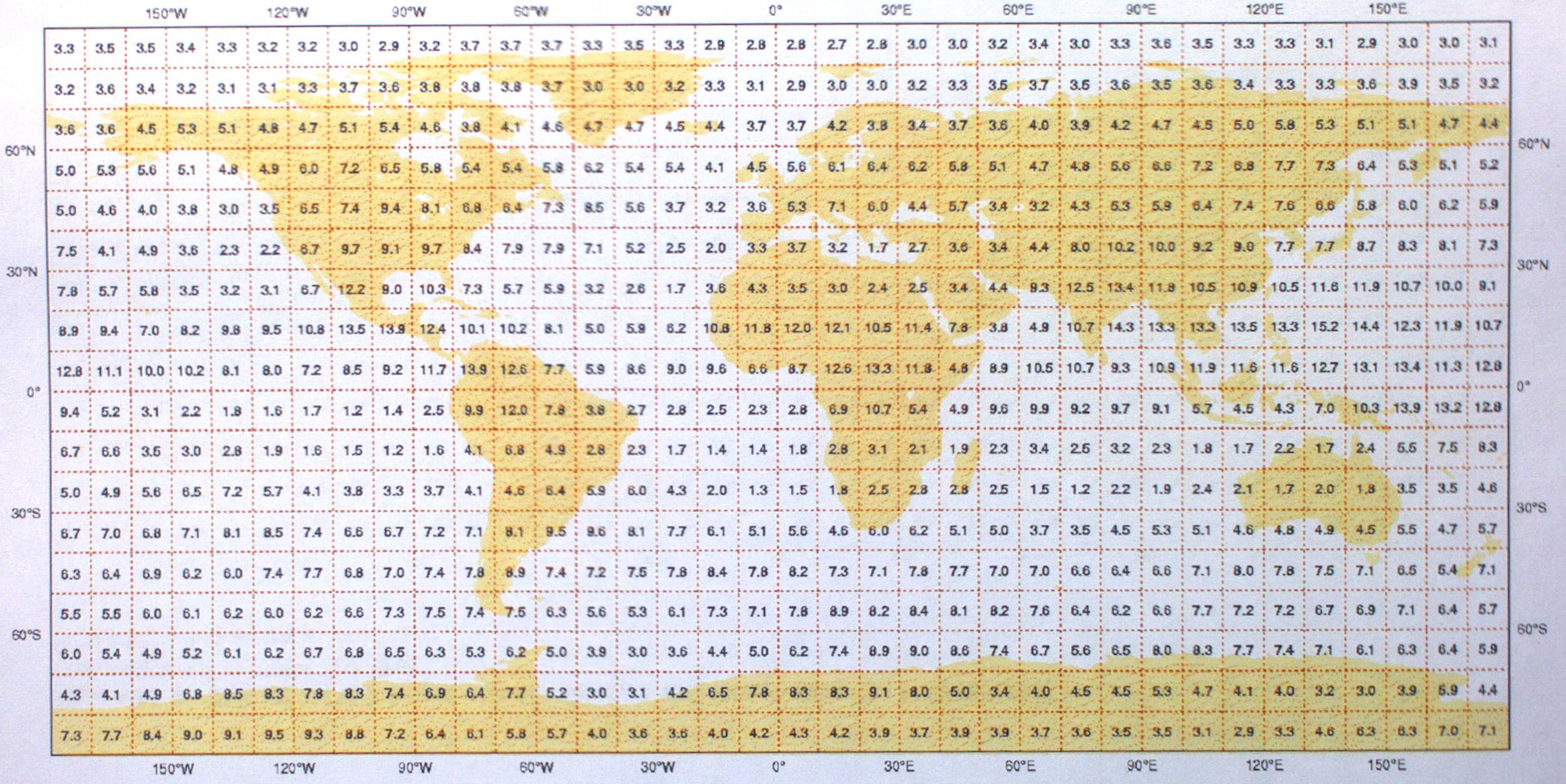
2.4	2.6	2.6	2.4	2.2	2.2	2.2	2.0	2.0	2.2	2.5	2.6	2.6	2.2	2.2	2.3	1.9	1.8	1.9	1.8	1.9	2.0	2.0	2.1	2.1	1.9	2.1	2.3	2.3	2.2	2.2	2.0	1.8	1.9	2.0	2.2
2.5	2.7	2.6	2.4	2.3	2.2	2.4	2.7	2.8	3.2	3.2	3.2	3.1	2.2	2.2	2.6	2.6	2.6	2.5	2.5	2.5	2.8	2.7	2.7	2.7	2.7	3.0	2.9	2.8	2.7	2.6	2.6	2.9	3.2	2.7	2.4
3.2	3.2	3.9	4.5	4.4	4.3	4.2	4.6	4.7	4.1	3.4	3.5	4.0	3.9	4.1	4.0	3.8	3.5	3.6	4.0	3.5	3.2	3.4	3.2	3.4	3.5	3.6	3.8	3.6	4.3	5.2	4.8	4.6	4.6	4.3	3.9
4.7	5.1	5.3	4.7	4.0	4.4	5.4	6.4	5.7	5.2	4.8	4.6	5.2	5.7	5.2	5.2	3.9	4.1	5.0	5.8	6.0	5.5	5.4	4.9	4.5	4.4	4.7	5.7	6.1	6.2	6.8	6.7	6.3	5.2	5.2	5.1
5.0	4.6	3.9	3.5	2.4	3.0	6.3	7.7	9.0	7.5	6.7	6.0	7.0	8.4	5.8	3.7	2.8	3.2	4.9	6.5	5.9	4.1	4.8	2.9	2.5	4.2	5.7	6.7	7.3	7.6	7.6	6.9	6.4	5.9	6.1	5.9
7.5	3.5	4.6	3.3	1.4	1.3	6.3	9.5	8.5	8.5	7.9	7.7	7.7	7.2	5.2	2.1	1.6	2.9	3.6	2.9	1.4	1.7	3.3	2.5	3.9	8.0	9.7	9.9	8.9	8.8	7.9	7.7	9.0	8.4	8.0	7.2
7.5	4.9	5.3	2.5	2.5	2.9	6.0	11.2	8.3	9.3	6.9	5.2	5.4	2.9	2.3	1.9	4.2	5.5	4.4	2.8	1.9	2.7	4.4	4.9	8.9	11.4	12.0	10.6	10.0	10.3	9.6	10.7	11.2	10.4	9.5	8.5
8.1	8.4	6.5	7.4	8.7	8.9	10.1	12.3	12.5	11.0	9.2	9.0	7.2	4.6	5.8	6.1	9.9	10.5	11.0	10.7	9.9	10.7	7.8	4.2	4.4	10.1	13.6	12.4	11.7	12.6	12.5	14.2	13.1	11.5	11.1	9.8
11.8	10.5	9.4	9.4	7.6	7.6	7.0	8.3	8.6	10.7	12.0	10.9	6.8	6.0	8.5	8.9	9.5	6.3	8.4	11.2	11.4	10.3	3.9	7.5	9.9	10.4	9.3	10.8	11.3	11.0	11.1	12.1	12.1	12.6	10.6	11.7
7.9	3.8	2.0	1.2	1.0	.8	1.0	.7	.9	2.7	8.4	10.1	6.3	2.9	1.8	1.9	1.7	1.4	1.6	5.6	8.9	4.6	3.6	8.4	9.1	8.5	9.4	8.8	4.6	3.8	4.1	7.1	9.6	12.6	12.1	11.5
6.2	5.9	3.1	2.9	2.8	1.5	1.0	1.0	.8	.9	3.6	6.0	3.8	2.1	1.3	1.0	.9	.7	1.0	2.2	2.5	1.5	1.6	1.7	2.4	2.0	2.7	1.8	1.1	.8	1.0	.9	2.2	5.0	7.3	7.7
6.3	5.0	6.1	6.9	7.3	5.4	3.3	2.8	2.5	2.8	3.6	3.7	5.9	5.6	5.8	4.2	1.6	.9	.9	1.0	2.3	2.8	2.7	2.2	1.2	1.0	2.2	1.7	2.1	1.7	1.3	1.7	1.7	4.2	3.6	5.8
6.8	6.5	6.0	6.7	7.3	7.7	6.6	5.9	5.9	6.3	6.1	6.6	7.9	8.4	7.0	6.8	5.3	4.4	4.7	3.9	5.3	5.7	4.9	4.8	3.2	2.9	3.8	4.6	4.2	3.8	4.3	4.3	3.7	4.6	4.0	5.6
5.1	5.3	5.7	5.2	5.0	5.9	6.1	5.6	5.9	6.2	6.2	6.7	5.9	5.8	5.8	6.0	6.5	6.0	6.5	5.7	5.7	6.2	6.2	5.7	5.6	5.1	4.9	5.0	5.3	6.3	6.1	6.1	5.7	5.0	4.1	5.1
4.2	4.1	4.4	4.7	4.5	4.4	4.5	5.2	5.7	5.7	5.8	5.5	4.6	4.2	3.7	4.5	5.3	5.1	5.7	6.4	6.0	6.1	6.0	6.1	5.6	4.7	4.6	4.7	5.5	5.2	5.3	5.1	5.1	5.3	4.8	4.3
4.5	3.7	3.5	3.7	4.4	4.5	4.9	4.9	4.9	4.6	3.9	4.3	3.6	2.8	1.9	2.2	2.9	3.4	4.1	5.1	6.3	6.2	5.6	4.8	4.5	3.8	4.3	5.5	5.9	5.3	5.2	5.2	4.5	4.5	4.7	4.3
2.8	2.7	3.0	4.4	5.7	5.7	5.3	5.7	5.1	4.5	4.3	4.8	3.6	1.9	2.0	2.6	4.1	5.1	5.6	5.6	6.1	5.1	3.1	1.9	2.3	2.7	2.7	3.2	3.1	2.7	2.7	2.3	2.0	2.4	3.6	2.8
4.5	4.9	5.4	5.8	5.8	6.0	5.9	5.5	4.4	3.7	3.6	3.5	3.1	1.9	1.7	1.8	2.2	2.5	2.6	2.5	2.2	2.0	2.1	2.1	2.1	2.0	1.9	1.6	1.6	1.5	1.8	2.6	3.7	3.6	4.1	4.3

Figure 45. ATOVS MEAN O-B brightness temperature differences (deg C). AUGUST 2006
Channel: HIRS11 (500 - 700 hPa)
NOAA16, using all observations



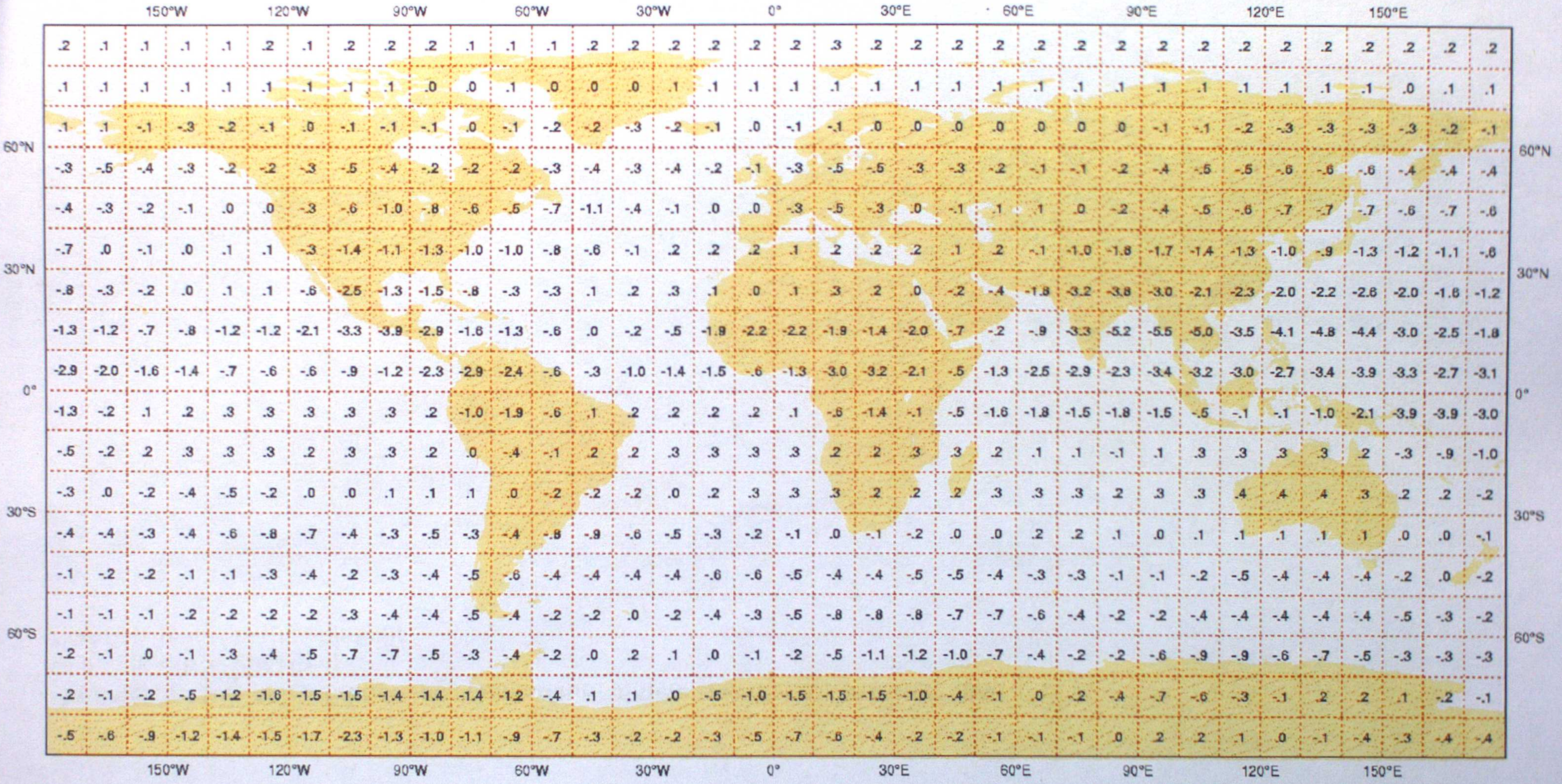
-3.5	-3.9	-3.7	-3.6	-3.5	-3.4	-3.6	-3.4	-3.4	-3.5	-3.6	-3.8	-3.8	-3.4	-3.3	-3.2	-2.8	-2.8	-2.7	-2.6	-2.6	-2.6	-2.9	-3.2	-3.3	-3.0	-3.2	-3.3	-3.2	-2.9	-2.9	-2.9	-2.7	-2.8	-3.0	-3.1
-2.1	-2.5	-2.5	-2.1	-1.7	-1.7	-1.9	-2.3	-2.1	-2.6	-2.6	-2.5	-3.2	-3.4	-2.9	-2.3	-1.9	-1.8	-1.8	-1.8	-1.9	-1.9	-1.9	-2.1	-2.4	-2.4	-2.5	-2.4	-2.4	-1.9	-1.6	-1.6	-1.9	-2.5	-2.5	-2.2
-1.9	-2.0	-3.5	-4.4	-3.7	-3.1	-2.3	-2.5	-2.5	-2.3	-2.4	-3.2	-3.7	-4.1	-3.6	-3.2	-2.3	-1.9	-1.8	-1.9	-1.4	-1.3	-1.4	-1.6	-1.7	-2.1	-2.3	-3.2	-2.7	-2.9	-3.6	-3.5	-3.4	-3.3	-2.9	-2.8
-3.2	-3.5	-3.8	-3.2	-3.0	-3.0	-3.3	-3.8	-3.4	-2.7	-2.7	-3.5	-3.3	-3.4	-2.7	-2.8	-2.0	-2.3	-3.4	-4.4	-4.0	-2.7	-2.2	-2.3	-1.7	-1.7	-2.6	-3.9	-4.0	-3.9	-4.6	-4.2	-3.2	-2.7	-2.7	-3.2
-2.2	-2.0	-1.8	-1.4	-.8	-.6	-2.7	-4.0	-4.4	-3.6	-3.3	-3.1	-3.8	-5.1	-2.4	-.9	-.5	-1.0	-2.5	-4.2	-2.3	-.8	-.2	1.2	1.3	.4	-1.2	-2.7	-3.7	-4.1	-3.8	-3.6	-3.3	-2.8	-3.3	-3.1
-3.3	-1.0	-1.7	-.9	.1	.4	-1.7	-5.2	-3.7	-4.8	-3.3	-3.8	-3.5	-2.6	-1.1	.1	.3	-.4	-.3	-.2	.2	.1	-.9	.6	-.3	-3.1	-6.2	-6.1	-5.4	-4.8	-3.9	-3.1	-4.4	-4.5	-4.2	-3.3
-3.5	-1.5	-1.4	-.5	.1	-.1	-2.0	-8.2	-4.5	-4.9	-3.2	-2.2	-1.9	-.3	-.1	.1	-1.1	-3.3	-2.2	-1.2	-.7	-1.2	-2.0	-1.0	-4.7	-8.1	-9.8	-8.5	-6.2	-6.9	-5.3	-5.9	-7.3	-6.0	-5.1	-4.3
-4.1	-4.0	-2.3	-2.8	-3.3	-3.4	-5.7	-9.2	-10.9	-8.5	-5.3	-4.5	-1.9	-.4	-1.2	-1.7	-6.3	-7.2	-7.1	-7.0	-4.2	-5.4	-2.0	-.4	-1.7	-8.0	-12.6	-14.5	-12.9	-9.7	-10.4	-12.2	-11.4	-8.4	-7.1	-5.4
-8.2	-6.2	-4.8	-4.4	-3.0	-2.3	-2.3	-3.3	-3.9	-7.2	-9.1	-8.6	-2.9	-1.2	-3.6	-4.5	-5.0	-1.5	-4.1	-10.1	-9.5	-5.2	-1.0	-3.6	-6.7	-8.3	-6.7	-10.2	-9.7	-9.6	-7.8	-9.7	-10.8	-8.9	-7.2	-8.6
-3.7	-.9	-.2	-.2	-.2	.0	.1	.4	.3	-.3	-4.3	-7.1	-3.6	-1.3	-.6	-.3	-.1	.1	-.3	-2.7	-5.9	-1.2	-1.5	-4.9	-5.4	-4.5	-5.7	-5.0	-1.9	-.9	-1.4	-3.4	-6.6	-10.9	-10.7	-8.3
-1.8	-1.2	.1	.3	-.1	.3	.1	.2	.3	.0	-1.3	-1.7	-1.8	-1.0	-.5	.0	.1	.0	.0	.0	-.5	-.2	-.1	.0	-.3	-.2	-.5	-.2	-.1	.1	-.2	-.6	-.8	-2.1	-3.5	-3.3
-2.4	-1.6	-2.4	-2.9	-3.4	-1.8	-.8	-.8	-.5	-.5	-.7	-.3	-1.6	-2.2	-1.9	-.9	.0	.0	.2	.4	.0	.1	.0	.1	.1	.1	-.2	.0	.0	.3	.2	.1	.0	-.7	-.7	-2.1
-3.3	-3.7	-3.2	-3.7	-4.6	-5.5	-4.9	-3.6	-3.4	-4.1	-3.8	-3.8	-4.9	-5.7	-4.3	-4.0	-2.7	-2.0	-2.1	-1.2	-2.2	-2.2	-1.7	-1.6	-.7	-.6	-1.4	-1.8	-1.6	-.9	-1.0	-1.3	-1.3	-1.9	-1.6	-2.3
-3.4	-3.5	-3.9	-3.4	-3.1	-4.2	-4.8	-4.1	-4.5	-5.0	-5.6	-6.2	-4.9	-4.9	-5.1	-5.0	-5.5	-5.6	-5.6	-4.9	-4.6	-5.1	-5.1	-4.6	-4.5	-4.4	-4.2	-4.4	-4.6	-5.5	-5.0	-4.5	-4.0	-3.1	-2.2	-3.4
-3.8	-3.8	-4.3	-4.7	-5.0	-4.4	-4.5	-5.0	-5.7	-5.3	-5.9	-5.4	-4.8	-4.9	-5.1	-6.1	-6.6	-6.4	-6.9	-8.8	-7.9	-7.8	-7.5	-7.0	-6.7	-6.1	-5.3	-5.5	-6.5	-5.9	-5.8	-6.1	-5.2	-5.1	-4.4	-3.8
-5.8	-5.1	-4.5	-4.6	-6.0	-5.8	-6.1	-6.5	-6.6	-5.7	-4.8	-4.7	-4.1	-3.9	-3.5	-4.3	-5.1	-6.1	-7.0	-8.3	-9.8	-9.3	-7.6	-5.8	-5.4	-4.9	-5.4	-6.7	-7.8	-7.7	-7.1	-6.6	-6.3	-6.3	-5.9	-5.7
-5.5	-5.7	-6.0	-6.8	-8.4	-9.5	-8.7	-8.3	-7.0	-5.7	-5.7	-4.7	-4.4	-2.6	-3.0	-3.2	-5.4	-7.2	-8.7	-8.2	-7.6	-4.7	-2.9	-1.3	-1.6	-2.4	-3.1	-3.6	-3.8	-3.0	-2.4	-.9	-1.4	-2.2	-4.9	-5.5
-6.5	-7.0	-7.8	-7.2	-5.9	-6.0	-6.0	-7.3	-3.7	-2.7	-4.2	-5.1	-3.8	-2.3	-1.9	-2.2	-3.0	-3.3	-3.5	-3.2	-2.8	-2.8	-3.2	-2.4	-2.2	-2.1	-2.3	-2.0	-2.3	-2.4	-2.6	-2.8	-3.9	-3.3	-5.7	-6.2

Figure 46. ATOVS SD O-B brightness temperature differences (deg C). AUGUST 2006
Channel: HIRS11 (500 - 700 hPa)
NOAA16, using all observations



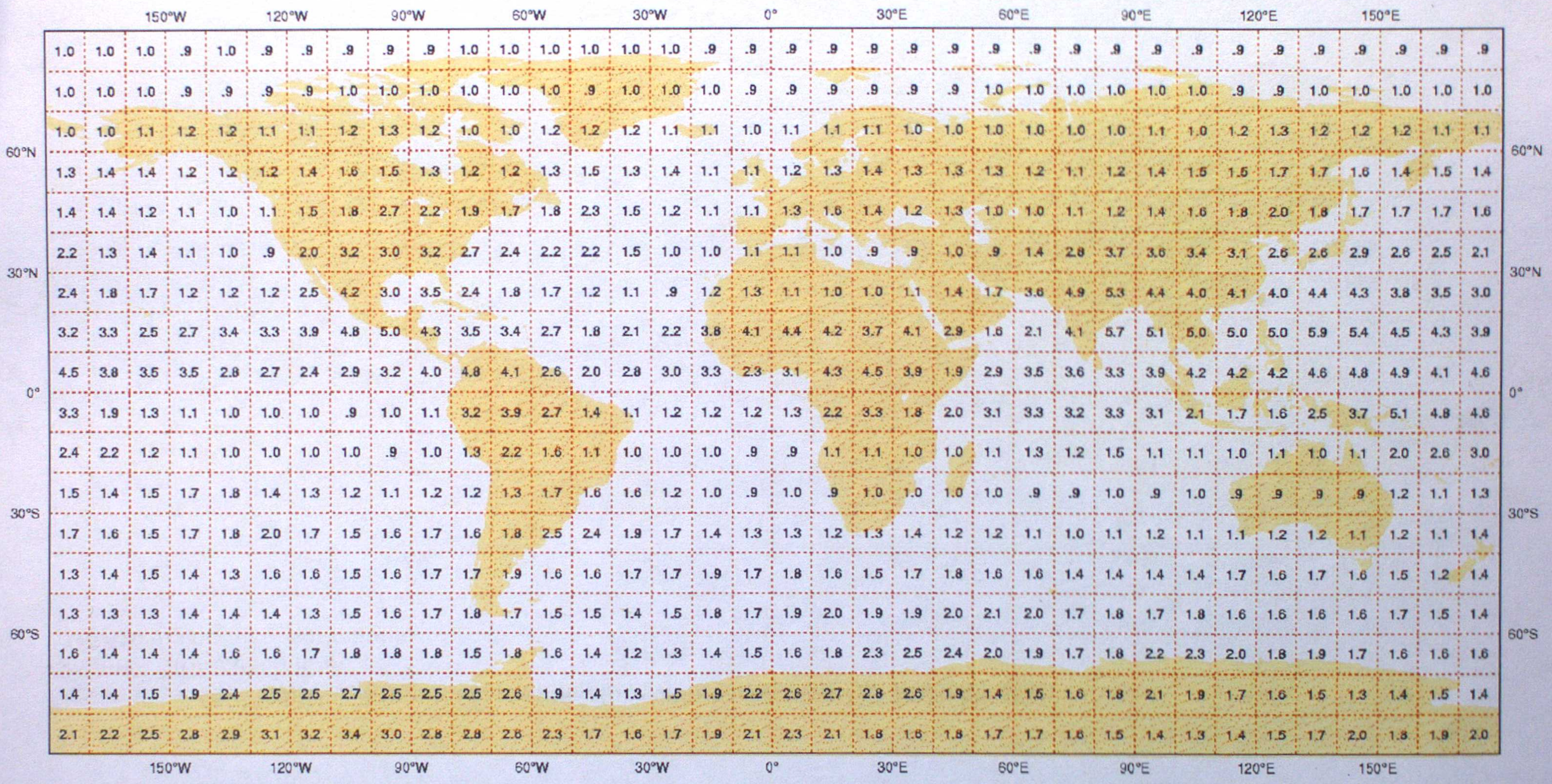
3.3	3.5	3.5	3.4	3.3	3.2	3.2	3.0	2.9	3.2	3.7	3.7	3.7	3.3	3.5	3.3	2.9	2.8	2.8	2.7	2.8	3.0	3.0	3.2	3.4	3.0	3.3	3.6	3.5	3.3	3.3	3.1	2.9	3.0	3.0	3.1
3.2	3.6	3.4	3.2	3.1	3.1	3.3	3.7	3.6	3.8	3.8	3.8	3.7	3.0	3.0	3.2	3.3	3.1	2.9	3.0	3.0	3.2	3.3	3.5	3.7	3.5	3.6	3.5	3.6	3.4	3.3	3.3	3.6	3.9	3.5	3.2
3.6	3.6	4.5	5.3	5.1	4.8	4.7	5.1	5.4	4.6	3.8	4.1	4.6	4.7	4.7	4.5	4.4	3.7	3.7	4.2	3.8	3.4	3.7	3.6	4.0	3.9	4.2	4.7	4.5	5.0	5.8	5.3	5.1	5.1	4.7	4.4
5.0	5.3	5.6	5.1	4.8	4.9	6.0	7.2	6.5	5.8	5.4	5.4	5.8	6.2	5.4	5.4	4.1	4.5	5.6	6.1	6.4	6.2	5.8	5.1	4.7	4.8	5.6	6.6	7.2	6.8	7.7	7.3	6.4	5.3	5.1	5.2
5.0	4.6	4.0	3.8	3.0	3.5	6.5	7.4	9.4	8.1	6.8	6.4	7.3	8.5	5.6	3.7	3.2	3.6	5.3	7.1	6.0	4.4	5.7	3.4	3.2	4.3	5.3	5.9	6.4	7.4	7.6	6.6	5.8	6.0	6.2	5.9
7.5	4.1	4.9	3.6	2.3	2.2	6.7	9.7	9.1	9.7	8.4	7.9	7.9	7.1	5.2	2.5	2.0	3.3	3.7	3.2	1.7	2.7	3.6	3.4	4.4	8.0	10.2	10.0	9.2	9.0	7.7	7.7	8.7	8.3	8.1	7.3
7.8	5.7	5.8	3.5	3.2	3.1	6.7	12.2	9.0	10.3	7.3	5.7	5.9	3.2	2.6	1.7	3.6	4.3	3.5	3.0	2.4	2.5	3.4	4.4	9.3	12.5	13.4	11.8	10.5	10.9	10.5	11.6	11.9	10.7	10.0	9.1
8.9	9.4	7.0	8.2	9.8	9.5	10.8	13.5	13.9	12.4	10.1	10.2	8.1	5.0	5.9	6.2	10.8	11.8	12.0	12.1	10.5	11.4	7.8	3.8	4.9	10.7	14.3	13.3	13.3	13.5	13.3	15.2	14.4	12.3	11.9	10.7
12.8	11.1	10.0	10.2	8.1	8.0	7.2	8.5	9.2	11.7	13.9	12.6	7.7	5.9	8.6	9.0	9.6	6.6	8.7	12.6	13.3	11.8	4.8	8.9	10.5	10.7	9.3	10.9	11.9	11.6	11.6	12.7	13.1	13.4	11.3	12.8
9.4	5.2	3.1	2.2	1.8	1.6	1.7	1.2	1.4	2.5	9.9	12.0	7.8	3.8	2.7	2.8	2.5	2.3	2.8	6.9	10.7	5.4	4.9	9.6	9.9	9.2	9.7	9.1	5.7	4.5	4.3	7.0	10.3	13.9	13.2	12.8
6.7	6.6	3.5	3.0	2.8	1.9	1.6	1.5	1.2	1.6	4.1	6.8	4.9	2.8	2.3	1.7	1.4	1.4	1.8	2.8	3.1	2.1	1.9	2.3	3.4	2.5	3.2	2.3	1.8	1.7	2.2	1.7	2.4	5.5	7.5	8.3
5.0	4.9	5.6	6.5	7.2	5.7	4.1	3.8	3.3	3.7	4.1	4.6	6.4	5.9	6.0	4.3	2.0	1.3	1.5	1.8	2.5	2.8	2.8	2.5	1.5	1.2	2.2	1.9	2.4	2.1	1.7	2.0	1.8	3.5	3.5	4.6
6.7	7.0	6.8	7.1	8.1	8.5	7.4	6.6	6.7	7.2	7.1	8.1	9.5	9.6	8.1	7.7	6.1	5.1	5.6	4.6	6.0	6.2	5.1	5.0	3.7	3.5	4.5	5.3	5.1	4.6	4.8	4.9	4.5	5.5	4.7	5.7
6.3	6.4	6.9	6.2	6.0	7.4	7.7	6.8	7.0	7.4	7.8	8.9	7.4	7.2	7.5	7.8	8.4	7.8	8.2	7.3	7.1	7.8	7.7	7.0	7.0	6.6	6.4	6.6	7.1	8.0	7.8	7.5	7.1	6.5	6.4	7.1
5.5	5.5	6.0	6.1	6.2	6.0	6.2	6.6	7.3	7.5	7.4	7.5	6.3	5.6	5.3	6.1	7.3	7.1	7.8	8.9	8.2	8.4	8.1	8.2	7.6	6.4	6.2	6.6	7.7	7.2	7.2	6.7	6.9	7.1	6.4	5.7
6.0	5.4	4.9	5.2	6.1	6.2	6.7	6.8	6.5	6.3	5.3	6.2	5.0	3.9	3.0	3.6	4.4	5.0	6.2	7.4	8.9	9.0	8.6	7.4	6.7	5.6	6.5	8.0	8.3	7.7	7.4	7.1	6.1	6.3	6.4	5.9
4.3	4.1	4.9	6.8	8.5	8.3	7.8	8.3	7.4	6.9	6.4	7.7	5.2	3.0	3.1	4.2	6.5	7.8	8.3	8.3	9.1	8.0	5.0	3.4	4.0	4.5	4.5	5.3	4.7	4.1	4.0	3.2	3.0	3.9	6.9	4.4
7.3	7.7	8.4	9.0	9.1	9.5	9.3	8.8	7.2	6.4	6.1	5.8	5.7	4.0	3.6	3.6	4.0	4.2	4.3	4.2	3.9	3.7	3.9	3.9	3.7	3.6	3.5	3.5	3.1	2.9	3.3	4.6	6.3	6.3	7.0	7.1

Figure 47. ATOVS MEAN O-B brightness temperature differences (deg C). AUGUST 2006
Channel: HIRS4 (400 hPa)
NOAA16, using all observations



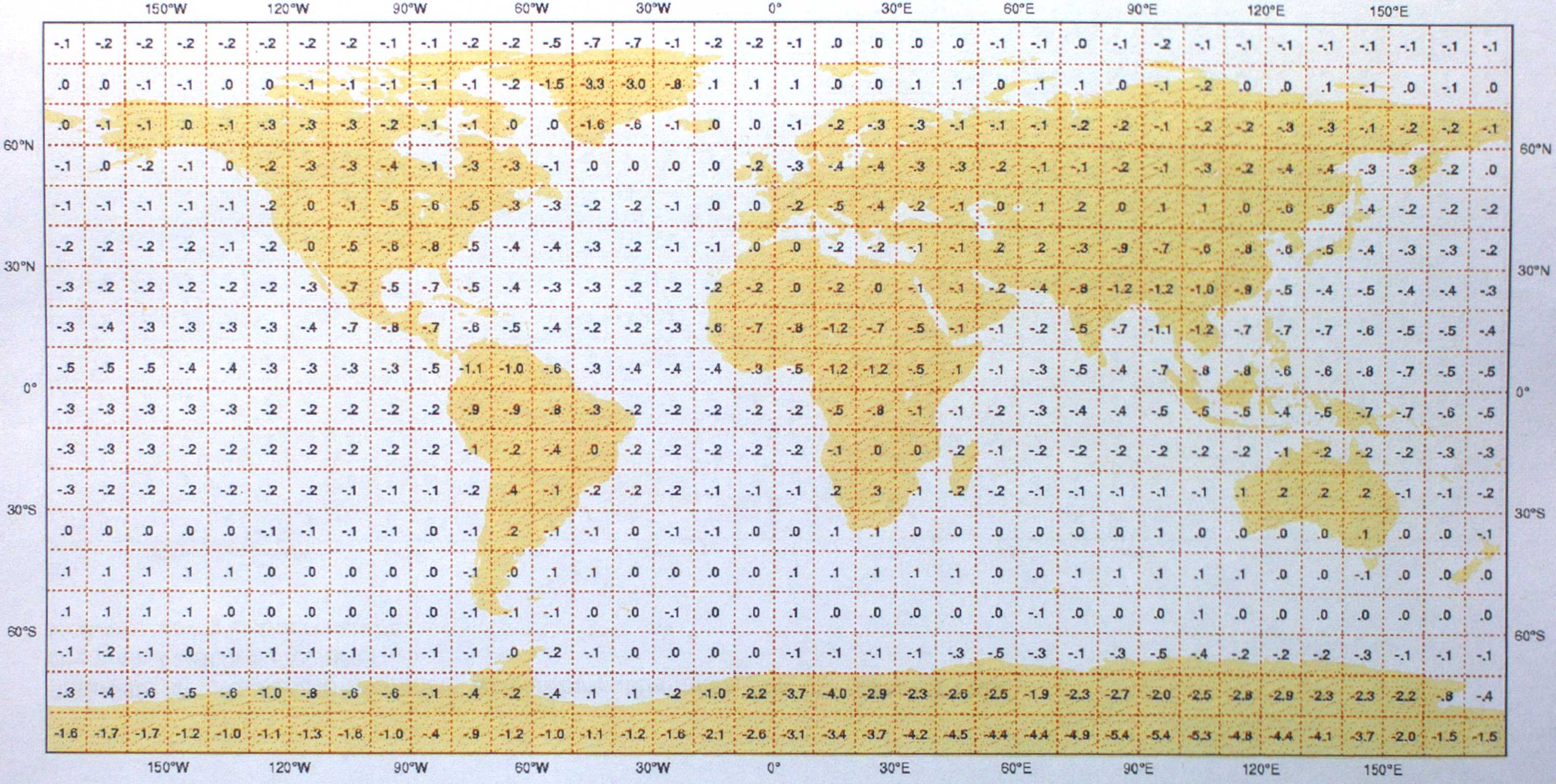
.2	.1	.1	.1	.1	.2	.1	.2	.2	.2	.1	.1	.1	.2	.2	.2	.2	.2	.2	.3	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2
.1	.1	.1	.1	.1	.1	.1	.1	.1	.0	.0	.1	.0	.0	.0	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.0	.1	.1
.1	.1	-.1	-.3	-.2	-.1	.0	-.1	-.1	-.1	.0	-.1	-.2	-.2	-.3	-.2	-.1	.0	-.1	-.1	.0	.0	.0	.0	.0	.0	.0	-.1	-.1	-.2	-.3	-.3	-.3	-.3	-.2	-.1
-.3	-.5	-.4	-.3	-.2	-.2	-.3	-.5	-.4	-.2	-.2	-.2	-.3	-.4	-.3	-.4	-.2	-.1	-.3	-.5	-.5	-.3	-.3	-.2	-.1	-.1	-.2	-.4	-.5	-.5	-.6	-.6	-.6	-.4	-.4	-.4
-.4	-.3	-.2	-.1	.0	.0	-.3	-.6	-1.0	-.8	-.6	-.5	-.7	-1.1	-.4	-.1	.0	.0	-.3	-.5	-.3	.0	-.1	.1	.1	.0	-.2	-.4	-.5	-.6	-.7	-.7	-.7	-.6	-.7	-.6
-.7	.0	-.1	.0	.1	.1	-.3	-1.4	-1.1	-1.3	-1.0	-1.0	-.8	-.6	-.1	.2	.2	.2	.1	.2	.2	.2	.1	.2	-.1	-1.0	-1.8	-1.7	-1.4	-1.3	-1.0	-.9	-1.3	-1.2	-1.1	-.6
-.8	-.3	-.2	.0	.1	.1	-.6	-2.5	-1.3	-1.5	-.8	-.3	-.3	.1	.2	.3	.1	.0	.1	.3	.2	.0	-.2	-.4	-1.8	-3.2	-3.8	-3.0	-2.1	-2.3	-2.0	-2.2	-2.6	-2.0	-1.6	-1.2
-1.3	-1.2	-.7	-.8	-1.2	-1.2	-2.1	-3.3	-3.9	-2.9	-1.6	-1.3	-.6	.0	-.2	-.5	-1.9	-2.2	-2.2	-1.9	-1.4	-2.0	-.7	-.2	-.9	-3.3	-5.2	-5.5	-5.0	-3.5	-4.1	-4.8	-4.4	-3.0	-2.5	-1.8
-2.9	-2.0	-1.6	-1.4	-.7	-.6	-.6	-.9	-1.2	-2.3	-2.9	-2.4	-.6	-.3	-1.0	-1.4	-1.5	-.6	-1.3	-3.0	-3.2	-2.1	-.5	-1.3	-2.5	-2.9	-2.3	-3.4	-3.2	-3.0	-2.7	-3.4	-3.9	-3.3	-2.7	-3.1
-1.3	-.2	.1	.2	.3	.3	.3	.3	.3	.2	-1.0	-1.9	-.6	.1	.2	.2	.2	.2	.1	-.6	-1.4	-.1	-.5	-1.6	-1.8	-1.5	-1.8	-1.5	-.5	-.1	-.1	-1.0	-2.1	-3.9	-3.9	-3.0
-.5	-.2	.2	.3	.3	.3	.2	.3	.3	.2	.0	-.4	-.1	.2	.2	.3	.3	.3	.3	.2	.2	.3	.3	.2	.1	.1	-.1	.1	.3	.3	.3	.3	.2	-.3	-.9	-1.0
-.3	.0	-.2	-.4	-.5	-.2	.0	.0	.1	.1	.1	.0	-.2	-.2	-.2	.0	.2	.3	.3	.3	.2	.2	.2	.3	.3	.3	.2	.3	.3	.4	.4	.4	.3	.2	.2	-.2
-.4	-.4	-.3	-.4	-.6	-.8	-.7	-.4	-.3	-.5	-.3	-.4	-.8	-.9	-.6	-.5	-.3	-.2	-.1	.0	-.1	-.2	.0	.0	.2	.2	.1	.0	.1	.1	.1	.1	.1	.0	.0	-.1
-.1	-.2	-.2	-.1	-.1	-.3	-.4	-.2	-.3	-.4	-.5	-.6	-.4	-.4	-.4	-.4	-.6	-.6	-.5	-.4	-.4	-.5	-.5	-.4	-.3	-.3	-.1	-.1	-.2	-.5	-.4	-.4	-.4	-.2	.0	-.2
-.1	-.1	-.1	-.2	-.2	-.2	-.2	-.3	-.4	-.4	-.5	-.4	-.2	-.2	.0	-.2	-.4	-.3	-.5	-.8	-.8	-.8	-.7	-.7	-.6	-.4	-.2	-.2	-.4	-.4	-.4	-.4	-.4	-.5	-.3	-.2
-.2	-.1	.0	-.1	-.3	-.4	-.5	-.7	-.7	-.5	-.3	-.4	-.2	.0	.2	.1	.0	-.1	-.2	-.5	-1.1	-1.2	-1.0	-.7	-.4	-.2	-.2	-.6	-.9	-.9	-.6	-.7	-.5	-.3	-.3	-.3
-.2	-.1	-.2	-.5	-1.2	-1.6	-1.5	-1.5	-1.4	-1.4	-1.4	-1.2	-.4	.1	.1	.0	-.5	-1.0	-1.5	-1.5	-1.5	-1.0	-.4	-.1	.0	-.2	-.4	-.7	-.6	-.3	-.1	.2	.2	.1	-.2	-.1
-.5	-.6	-.9	-1.2	-1.4	-1.5	-1.7	-2.3	-1.3	-1.0	-1.1	-.9	-.7	-.3	-.2	-.2	-.3	-.5	-.7	-.6	-.4	-.2	-.2	-.1	-.1	-.1	.0	.2	.2	.1	.0	-.1	-.4	-.3	-.4	-.4

Figure 48. ATOVS SD O-B brightness temperature differences (deg C). AUGUST 2006
Channel: HIRS4 (400 hPa)
NOAA16, using all observations



1.0	1.0	1.0	.9	1.0	.9	.9	.9	.9	.9	1.0	1.0	1.0	1.0	1.0	1.0	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9
1.0	1.0	1.0	.9	.9	.9	.9	1.0	1.0	1.0	1.0	1.0	1.0	.9	1.0	1.0	1.0	.9	.9	.9	.9	.9	.9	1.0	1.0	1.0	1.0	1.0	1.0	.9	.9	1.0	1.0	1.0	1.0	1.0
1.0	1.0	1.1	1.2	1.2	1.1	1.1	1.2	1.3	1.2	1.0	1.0	1.2	1.2	1.2	1.1	1.1	1.0	1.1	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.0	1.2	1.3	1.2	1.2	1.2	1.1	1.1
1.3	1.4	1.4	1.2	1.2	1.2	1.4	1.6	1.5	1.3	1.2	1.2	1.3	1.5	1.3	1.4	1.1	1.1	1.2	1.3	1.4	1.3	1.3	1.3	1.2	1.1	1.2	1.4	1.5	1.5	1.7	1.7	1.6	1.4	1.5	1.4
1.4	1.4	1.2	1.1	1.0	1.1	1.5	1.8	2.7	2.2	1.9	1.7	1.8	2.3	1.5	1.2	1.1	1.1	1.3	1.6	1.4	1.2	1.3	1.0	1.0	1.1	1.2	1.4	1.6	1.8	2.0	1.8	1.7	1.7	1.7	1.6
2.2	1.3	1.4	1.1	1.0	.9	2.0	3.2	3.0	3.2	2.7	2.4	2.2	2.2	1.5	1.0	1.0	1.1	1.1	1.0	.9	.9	1.0	.9	1.4	2.8	3.7	3.6	3.4	3.1	2.6	2.6	2.9	2.6	2.5	2.1
2.4	1.8	1.7	1.2	1.2	1.2	2.5	4.2	3.0	3.5	2.4	1.8	1.7	1.2	1.1	.9	1.2	1.3	1.1	1.0	1.0	1.1	1.4	1.7	3.6	4.9	5.3	4.4	4.0	4.1	4.0	4.4	4.3	3.8	3.5	3.0
3.2	3.3	2.5	2.7	3.4	3.3	3.9	4.8	5.0	4.3	3.5	3.4	2.7	1.8	2.1	2.2	3.8	4.1	4.4	4.2	3.7	4.1	2.9	1.6	2.1	4.1	5.7	5.1	5.0	5.0	5.0	5.9	5.4	4.5	4.3	3.9
4.5	3.8	3.5	3.5	2.8	2.7	2.4	2.9	3.2	4.0	4.8	4.1	2.6	2.0	2.8	3.0	3.3	2.3	3.1	4.3	4.5	3.9	1.9	2.9	3.5	3.6	3.3	3.9	4.2	4.2	4.2	4.6	4.8	4.9	4.1	4.6
3.3	1.9	1.3	1.1	1.0	1.0	1.0	.9	1.0	1.1	3.2	3.9	2.7	1.4	1.1	1.2	1.2	1.2	1.3	2.2	3.3	1.8	2.0	3.1	3.3	3.2	3.3	3.1	2.1	1.7	1.6	2.5	3.7	5.1	4.8	4.6
2.4	2.2	1.2	1.1	1.0	1.0	1.0	1.0	.9	1.0	1.3	2.2	1.6	1.1	1.0	1.0	1.0	.9	.9	1.1	1.1	1.0	1.0	1.1	1.3	1.2	1.5	1.1	1.1	1.0	1.1	1.0	1.1	2.0	2.6	3.0
1.5	1.4	1.5	1.7	1.8	1.4	1.3	1.2	1.1	1.2	1.2	1.3	1.7	1.6	1.6	1.2	1.0	.9	1.0	.9	1.0	1.0	1.0	1.0	.9	.9	1.0	.9	1.0	.9	.9	.9	.9	1.2	1.1	1.3
1.7	1.6	1.5	1.7	1.8	2.0	1.7	1.5	1.6	1.7	1.6	1.8	2.5	2.4	1.9	1.7	1.4	1.3	1.3	1.2	1.3	1.4	1.2	1.2	1.1	1.0	1.1	1.2	1.1	1.1	1.2	1.2	1.1	1.2	1.1	1.4
1.3	1.4	1.5	1.4	1.3	1.6	1.6	1.5	1.6	1.7	1.7	1.9	1.6	1.6	1.7	1.7	1.9	1.7	1.8	1.6	1.5	1.7	1.8	1.6	1.6	1.4	1.4	1.4	1.4	1.7	1.6	1.7	1.6	1.5	1.2	1.4
1.3	1.3	1.3	1.4	1.4	1.4	1.3	1.5	1.6	1.7	1.8	1.7	1.5	1.5	1.4	1.5	1.8	1.7	1.9	2.0	1.9	1.9	2.0	2.1	2.0	1.7	1.8	1.7	1.8	1.6	1.6	1.6	1.6	1.7	1.5	1.4
1.6	1.4	1.4	1.4	1.6	1.6	1.7	1.8	1.8	1.8	1.5	1.8	1.6	1.4	1.2	1.3	1.4	1.5	1.6	1.8	2.3	2.5	2.4	2.0	1.9	1.7	1.8	2.2	2.3	2.0	1.8	1.9	1.7	1.6	1.6	1.6
1.4	1.4	1.5	1.9	2.4	2.5	2.5	2.7	2.5	2.5	2.5	2.6	1.9	1.4	1.3	1.5	1.9	2.2	2.6	2.7	2.8	2.6	1.9	1.4	1.5	1.6	1.8	2.1	1.9	1.7	1.6	1.5	1.3	1.4	1.5	1.4
2.1	2.2	2.5	2.8	2.9	3.1	3.2	3.4	3.0	2.8	2.8	2.6	2.3	1.7	1.6	1.7	1.9	2.1	2.3	2.1	1.8	1.6	1.8	1.7	1.7	1.6	1.5	1.4	1.3	1.4	1.5	1.7	2.0	1.8	1.9	2.0

Figure 49. ATOVS MEAN O-B brightness temperature differences (deg C). AUGUST 2006
Channel: AMSUA-5 (700 hPa)
NOAA16, using all observations



-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1	-.2	-.2	-.5	-.7	-.7	-.1	-.2	-.2	-.1	.0	.0	.0	.0	-.1	-.1	.0	-.1	-.2	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1
.0	.0	-.1	-.1	.0	.0	-.1	-.1	-.1	-.1	-.1	-.2	-1.5	-3.3	-3.0	-.8	.1	.1	.1	.0	.0	.1	.1	.0	.1	.1	.0	-.1	-.2	.0	.0	.1	-.1	.0	-.1	.0
.0	-.1	-.1	.0	-.1	-.3	-.3	-.3	-.2	-.1	-.1	.0	.0	-1.6	-.6	-.1	.0	.0	-.1	-.2	-.3	-.3	-.1	-.1	-.1	-.2	-.2	-.1	-.2	-.2	-.3	-.3	-.1	-.2	-.2	-.1
-.1	.0	-.2	-.1	.0	-.2	-.3	-.3	-.4	-.1	-.3	-.3	-.1	.0	.0	.0	.0	-.2	-.3	-.4	-.4	-.3	-.3	-.2	-.1	-.1	-.2	-.1	-.3	-.2	-.4	-.4	-.3	-.3	-.2	.0
-.1	-.1	-.1	-.1	-.1	-.2	.0	-.1	-.5	-.6	-.5	-.3	-.3	-.2	-.2	-.1	.0	.0	-.2	-.5	-.4	-.2	-.1	.0	.1	.2	.0	.1	.1	.0	-.6	-.6	-.4	-.2	-.2	-.2
-.2	-.2	-.2	-.2	-.1	-.2	.0	-.5	-.6	-.8	-.5	-.4	-.4	-.3	-.2	-.1	-.1	.0	.0	-.2	-.2	-.1	-.1	.2	.2	-.3	-.9	-.7	-.6	-.8	-.6	-.5	-.4	-.3	-.3	-.2
-.3	-.2	-.2	-.2	-.2	-.2	-.3	-.7	-.5	-.7	-.5	-.4	-.3	-.3	-.2	-.2	-.2	-.2	.0	-.2	.0	-.1	-.1	-.2	-.4	-.8	-1.2	-1.2	-1.0	-.9	-.5	-.4	-.5	-.4	-.4	-.3
-.3	-.4	-.3	-.3	-.3	-.3	-.4	-.7	-.8	-.7	-.6	-.5	-.4	-.2	-.2	-.3	-.6	-.7	-.8	-1.2	-.7	-.5	-.1	-.1	-.2	-.5	-.7	-1.1	-1.2	-.7	-.7	-.7	-.6	-.5	-.5	-.4
-.5	-.5	-.5	-.4	-.4	-.3	-.3	-.3	-.3	-.5	-1.1	-1.0	-.6	-.3	-.4	-.4	-.4	-.3	-.5	-1.2	-1.2	-.5	.1	-.1	-.3	-.5	-.4	-.7	-.8	-.8	-.6	-.6	-.8	-.7	-.5	-.5
-.3	-.3	-.3	-.3	-.3	-.2	-.2	-.2	-.2	-.2	-.9	-.9	-.8	-.3	-.2	-.2	-.2	-.2	-.2	-.5	-.8	-.1	-.1	-.2	-.3	-.4	-.4	-.5	-.5	-.5	-.4	-.5	-.7	-.7	-.6	-.5
-.3	-.3	-.3	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.2	-.4	.0	-.2	-.2	-.2	-.2	-.2	-.1	.0	.0	-.2	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.2	-.2	-.2	-.3	-.3
-.3	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1	-.1	-.2	.4	-.1	-.2	-.2	-.2	-.1	-.1	-.1	.2	.3	-.1	-.2	-.2	-.1	-.1	-.1	-.1	-.1	.1	.2	.2	.2	-.1	-.1	-.2
.0	.0	.0	.0	.0	-.1	-.1	-.1	-.1	.0	-.1	.2	-.1	-.1	.0	-.1	-.1	.0	.0	.1	.1	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.1	.0	.0	-.1
.1	.1	.1	.1	.1	.0	.0	.0	.0	.0	-.1	.0	.1	.1	.0	.0	.0	.0	.1	.1	.1	.1	.1	.0	.0	.1	.1	.1	.1	.1	.0	.0	-.1	.0	.0	.0
.1	.1	.1	.1	.0	.0	.0	.0	.0	.0	-.1	-.1	-.1	.0	.0	-.1	.0	.0	.1	.0	.0	.0	.0	.0	-.1	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
-.1	-.2	-.1	.0	-.1	-.1	-.1	-.1	-.1	-.1	-.1	.0	-.2	-.1	.0	.0	.0	.0	-.1	-.1	-.1	-.1	-.3	-.5	-.3	-.1	-.3	-.5	-.4	-.2	-.2	-.2	-.3	-.1	-.1	-.1
-.3	-.4	-.6	-.5	-.6	-1.0	-.8	-.6	-.6	-.1	-.4	-.2	-.4	.1	.1	-.2	-1.0	-2.2	-3.7	-4.0	-2.9	-2.3	-2.6	-2.5	-1.9	-2.3	-2.7	-2.0	-2.5	-2.8	-2.9	-2.3	-2.3	-2.2	-.8	-.4
-1.6	-1.7	-1.7	-1.2	-1.0	-1.1	-1.3	-1.6	-1.0	-.4	-.9	-1.2	-1.0	-1.1	-1.2	-1.6	-2.1	-2.6	-3.1	-3.4	-3.7	-4.2	-4.5	-4.4	-4.4	-4.9	-5.4	-5.4	-5.3	-4.8	-4.4	-4.1	-3.7	-2.0	-1.5	-1.5

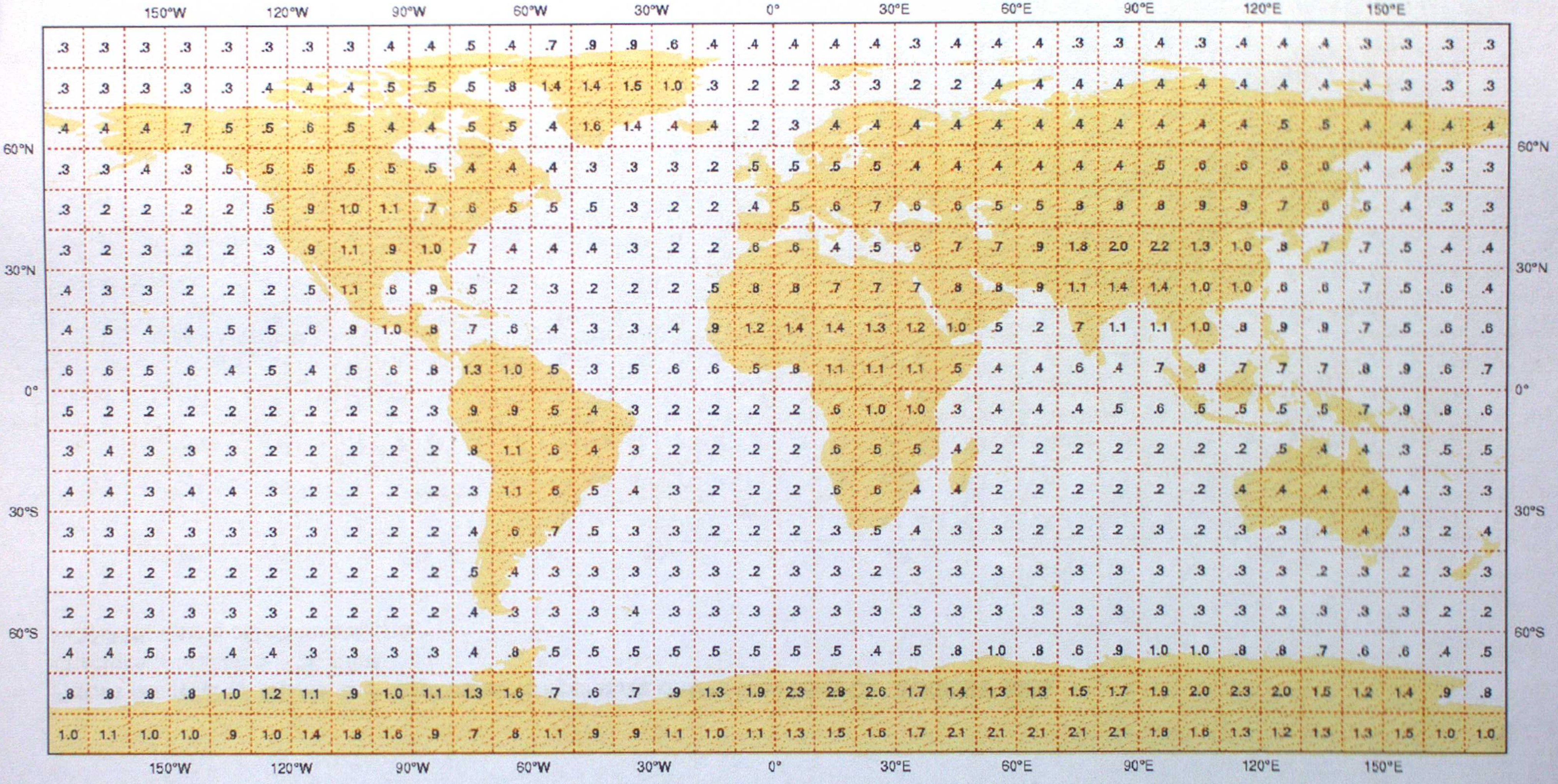
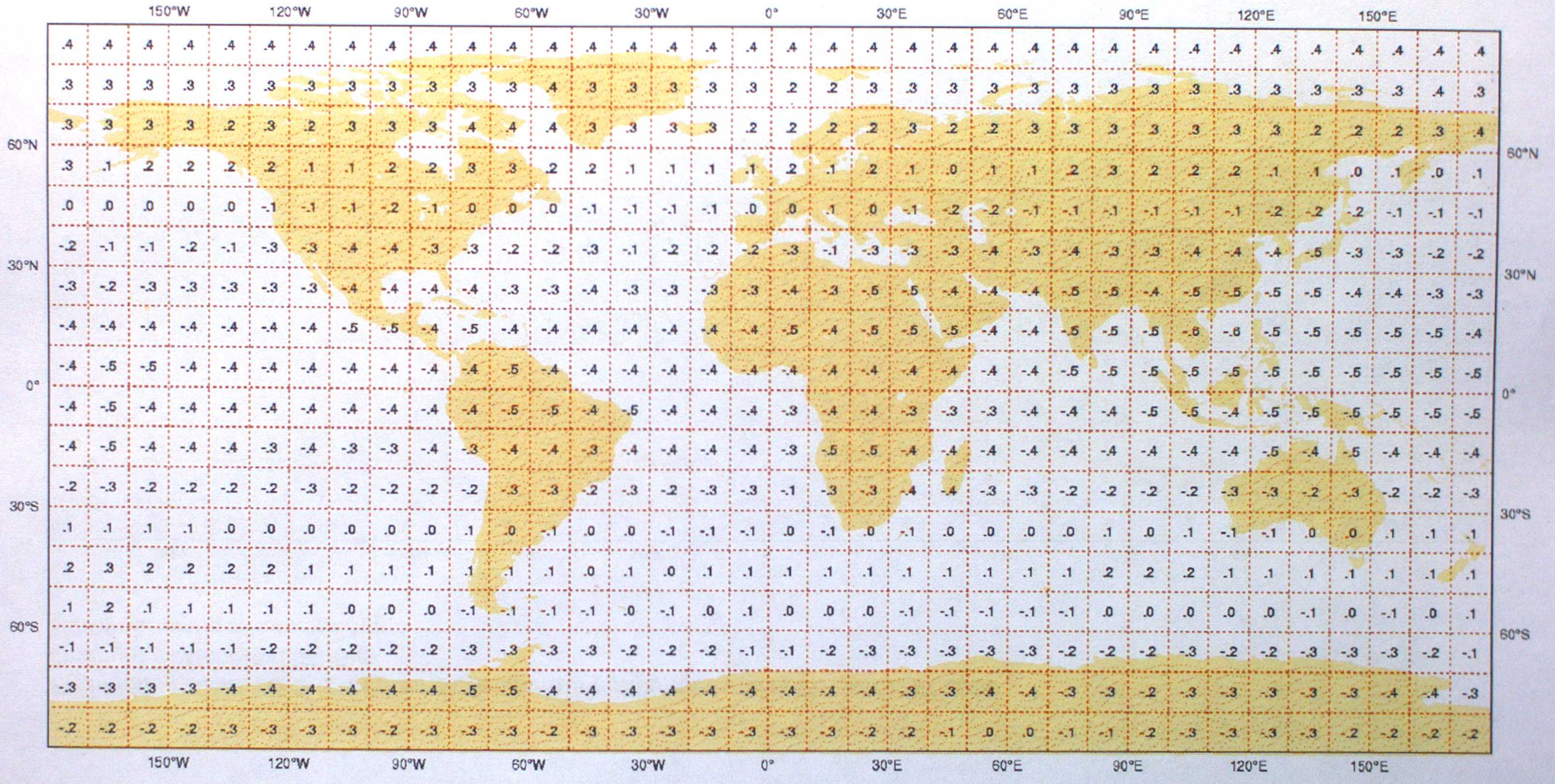


Figure 50. ATOVS SD O-B brightness temperature differences (deg C). AUGUST 2006
Channel: AMSUA-5 (700 hPa)
NOAA16, using all observations

.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.5	.4	.7	.9	.9	.6	.4	.4	.4	.4	.4	.3	.4	.4	.4	.3	.3	.4	.3	.4	.4	.4	.3	.3	.3	.3
.3	.3	.3	.3	.3	.4	.4	.4	.5	.5	.5	.8	1.4	1.4	1.5	1.0	.3	.2	.2	.3	.3	.2	.2	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3
.4	.4	.4	.7	.5	.5	.6	.5	.4	.4	.5	.5	.4	1.6	1.4	.4	.4	.2	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.5	.5	.4	.4	.4	.4
.3	.3	.4	.3	.5	.5	.5	.5	.5	.5	.4	.4	.4	.3	.3	.3	.2	.5	.5	.5	.5	.4	.4	.4	.4	.4	.4	.5	.6	.6	.6	.6	.4	.4	.3	.3
.3	.2	.2	.2	.2	.5	.9	1.0	1.1	.7	.6	.5	.5	.5	.3	.2	.2	.4	.5	.6	.7	.6	.6	.5	.5	.8	.8	.8	.9	.9	.7	.6	.5	.4	.3	.3
.3	.2	.3	.2	.2	.3	.9	1.1	.9	1.0	.7	.4	.4	.4	.3	.2	.2	.6	.6	.4	.5	.6	.7	.7	.9	1.8	2.0	2.2	1.3	1.0	.8	.7	.7	.5	.4	.4
.4	.3	.3	.2	.2	.2	.5	1.1	.6	.9	.5	.2	.3	.2	.2	.2	.5	.8	.8	.7	.7	.7	.8	.8	.9	1.1	1.4	1.4	1.0	1.0	.6	.6	.7	.5	.6	.4
.4	.5	.4	.4	.5	.5	.6	.9	1.0	.8	.7	.6	.4	.3	.3	.4	.9	1.2	1.4	1.4	1.3	1.2	1.0	.5	.2	.7	1.1	1.1	1.0	.8	.9	.9	.7	.5	.6	.6
.6	.6	.5	.6	.4	.5	.4	.5	.6	.8	1.3	1.0	.5	.3	.5	.6	.6	.5	.8	1.1	1.1	1.1	.5	.4	.4	.6	.4	.7	.8	.7	.7	.7	.8	.9	.6	.7
.5	.2	.2	.2	.2	.2	.2	.2	.2	.3	.9	.9	.5	.4	.3	.2	.2	.2	.2	.6	1.0	1.0	.3	.4	.4	.4	.5	.6	.5	.5	.5	.5	.7	.9	.8	.6
.3	.4	.3	.3	.3	.2	.2	.2	.2	.2	.8	1.1	.6	.4	.3	.2	.2	.2	.2	.6	.5	.5	.4	.2	.2	.2	.2	.2	.2	.2	.5	.4	.4	.3	.5	.5
.4	.4	.3	.4	.4	.3	.2	.2	.2	.2	.3	1.1	.6	.5	.4	.3	.2	.2	.2	.6	.6	.4	.4	.2	.2	.2	.2	.2	.2	.4	.4	.4	.4	.4	.3	.3
.3	.3	.3	.3	.3	.3	.3	.2	.2	.2	.4	.6	.7	.5	.3	.3	.2	.2	.2	.3	.5	.4	.3	.3	.2	.2	.2	.3	.2	.3	.3	.4	.4	.3	.2	.4
.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.5	.4	.3	.3	.3	.3	.3	.2	.3	.3	.2	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.2	.3	.2	.3	.3
.2	.2	.3	.3	.3	.3	.2	.2	.2	.2	.4	.3	.3	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.2	.2
.4	.4	.5	.5	.4	.4	.3	.3	.3	.3	.4	.8	.5	.5	.5	.5	.5	.5	.5	.5	.4	.5	.8	1.0	.8	.6	.9	1.0	1.0	.8	.8	.7	.6	.6	.4	.5
.8	.8	.8	.8	1.0	1.2	1.1	.9	1.0	1.1	1.3	1.6	.7	.6	.7	.9	1.3	1.9	2.3	2.8	2.6	1.7	1.4	1.3	1.3	1.5	1.7	1.9	2.0	2.3	2.0	1.5	1.2	1.4	.9	.8
1.0	1.1	1.0	1.0	.9	1.0	1.4	1.8	1.6	.9	.7	.8	1.1	.9	.9	1.1	1.0	1.1	1.3	1.5	1.6	1.7	2.1	2.1	2.1	2.1	2.1	1.8	1.6	1.3	1.2	1.3	1.3	1.5	1.0	1.0

Figure 51. ATOVS MEAN O-B brightness temperature differences (deg C). AUGUST 2006
Channel: AMSUA-7 (300 hPa)
NOAA16, using all observations



.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3	.3	.3	.3	.2	.2	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3
.3	.3	.3	.3	.2	.3	.2	.3	.3	.3	.4	.4	.4	.3	.3	.3	.3	.2	.2	.2	.2	.3	.2	.2	.3	.3	.3	.3	.3	.3	.3	.2	.2	.2	.3	.4
.3	.1	.2	.2	.2	.2	.1	.1	.2	.2	.3	.3	.2	.2	.1	.1	.1	.1	.2	.1	.2	.1	.0	.1	.1	.2	.3	.2	.2	.2	.1	.1	.0	.1	.0	.1
.0	.0	.0	.0	.0	-.1	-.1	-.1	-.2	-.1	.0	.0	.0	-.1	-.1	-.1	-.1	.0	.0	.1	.0	-.1	-.2	-.2	-.1	-.1	-.1	-.1	-.1	-.1	-.2	-.2	-.2	-.1	-.1	-.1
-.2	-.1	-.1	-.2	-.1	-.3	-.3	-.4	-.4	-.3	-.3	-.2	-.2	-.3	-.1	-.2	-.2	-.2	-.3	-.1	-.3	-.3	-.3	-.4	-.3	-.4	-.3	-.3	-.4	-.4	-.4	-.5	-.3	-.3	-.2	-.2
-.3	-.2	-.3	-.3	-.3	-.3	-.3	-.4	-.4	-.4	-.4	-.3	-.3	-.4	-.3	-.3	-.3	-.3	-.4	-.3	-.5	-.5	-.4	-.4	-.4	-.5	-.5	-.4	-.5	-.5	-.5	-.5	-.4	-.4	-.3	-.3
-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.5	-.5	-.4	-.5	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.5	-.4	-.5	-.5	-.5	-.4	-.4	-.5	-.5	-.5	-.6	-.6	-.5	-.5	-.5	-.5	-.5	-.4
-.4	-.5	-.5	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.5	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5
-.4	-.5	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.5	-.5	-.4	-.5	-.4	-.4	-.4	-.3	-.4	-.4	-.3	-.3	-.3	-.4	-.4	-.4	-.5	-.5	-.4	-.5	-.5	-.5	-.5	-.5	-.5
-.4	-.5	-.4	-.4	-.4	-.3	-.4	-.3	-.3	-.4	-.3	-.4	-.4	-.3	-.4	-.4	-.4	-.4	-.3	-.5	-.5	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.5	-.4	-.5	-.4	-.4	-.4
-.2	-.3	-.2	-.2	-.2	-.2	-.3	-.2	-.2	-.2	-.2	-.3	-.3	-.2	-.3	-.2	-.3	-.3	-.1	-.3	-.3	-.4	-.4	-.3	-.3	-.2	-.2	-.2	-.2	-.3	-.3	-.2	-.3	-.2	-.2	-.3
.1	.1	.1	.1	.0	.0	.0	.0	.0	.0	.1	.0	-.1	.0	.0	-.1	-.1	-.1	.0	-.1	.0	-.1	.0	.0	.0	.0	.1	.0	.1	-.1	-.1	.0	.0	.1	.1	.1
.2	.3	.2	.2	.2	.2	.1	.1	.1	.1	.1	.1	.1	.0	.1	.0	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.2	.2	.2	.1	.1	.1	.1	.1	.1	.1
.1	.2	.1	.1	.1	.1	.1	.0	.0	.0	-.1	-.1	-.1	-.1	.0	-.1	.0	.1	.0	.0	.0	-.1	-.1	-.1	-.1	-.1	.0	.0	.0	.0	.0	-.1	.0	-.1	.0	.1
-.1	-.1	-.1	-.1	-.1	-.2	-.2	-.2	-.2	-.2	-.3	-.3	-.3	-.3	-.2	-.2	-.2	-.1	-.1	-.2	-.3	-.3	-.3	-.3	-.3	-.2	-.2	-.2	-.3	-.2	-.2	-.3	-.3	-.3	-.2	-.1
-.3	-.3	-.3	-.3	-.4	-.4	-.4	-.4	-.4	-.4	-.5	-.5	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.3	-.3	-.4	-.4	-.3	-.3	-.2	-.3	-.3	-.3	-.3	-.3	-.4	-.4	-.3
-.2	-.2	-.2	-.2	-.3	-.3	-.3	-.3	-.2	-.3	-.3	-.3	-.2	-.3	-.3	-.3	-.3	-.3	-.3	-.3	-.2	-.2	-.1	.0	.0	-.1	-.1	-.2	-.3	-.3	-.3	-.3	-.2	-.2	-.2	-.2

Figure 52. ATOVS SD O-B brightness temperature differences (deg C). AUGUST 2006
Channel: AMSUA-7 (300 hPa)
NOAA16, using all observations

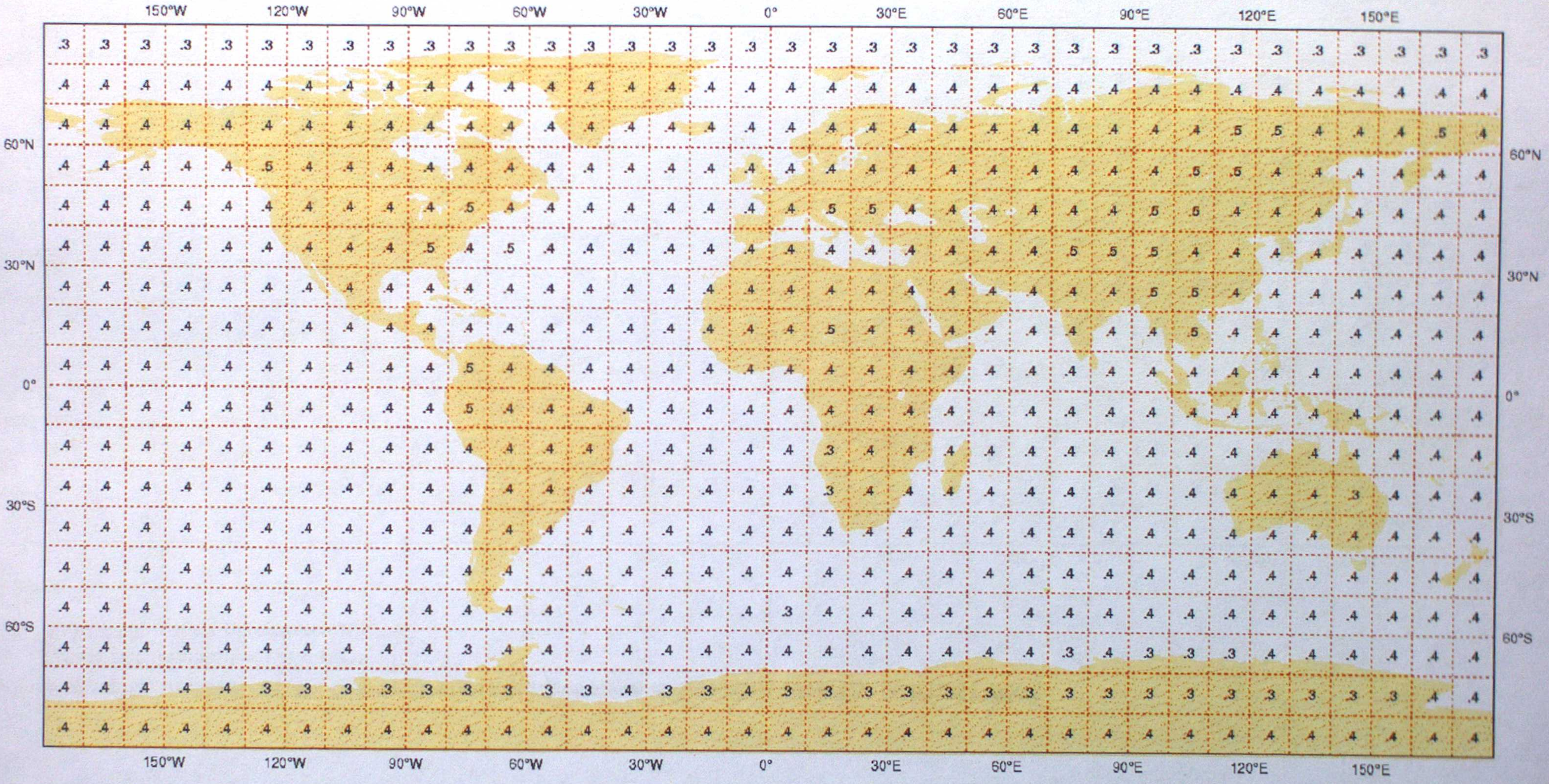
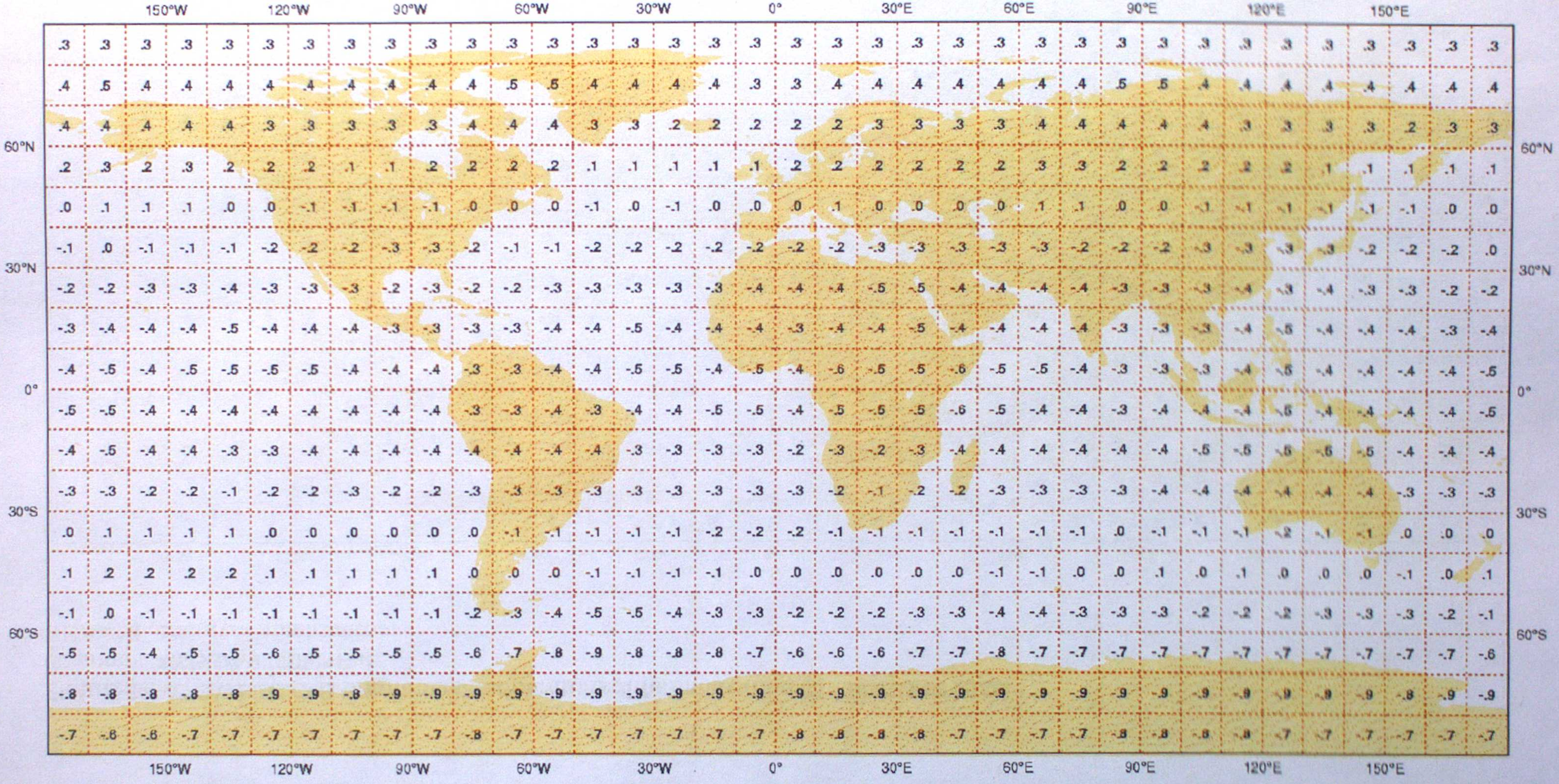
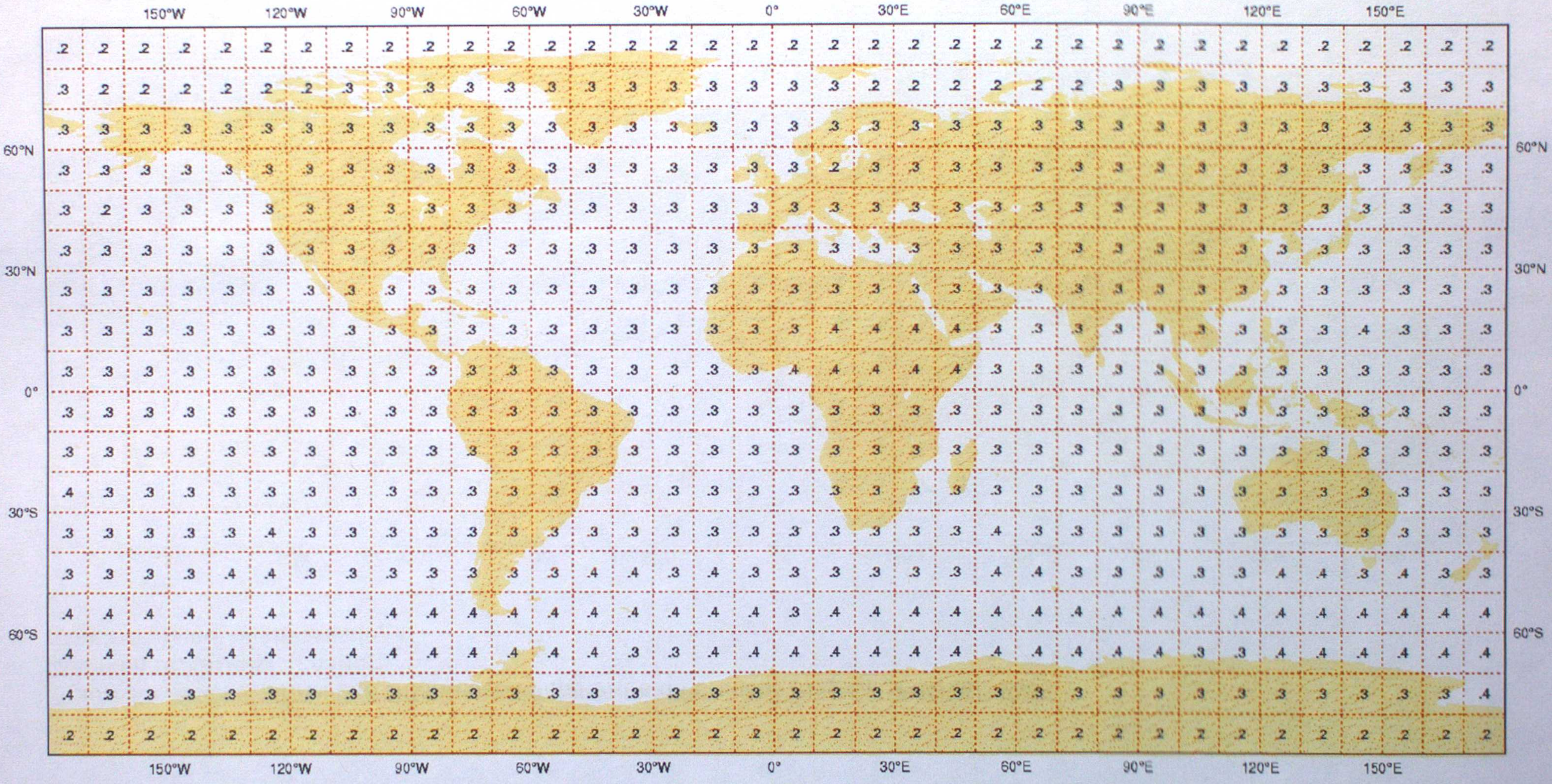

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S

Figure 53. ATOVS MEAN O-B brightness temperature differences (deg C). AUGUST 2006
Channel: AMSUA-9 (100 hPa)
NOAA16, using all observations



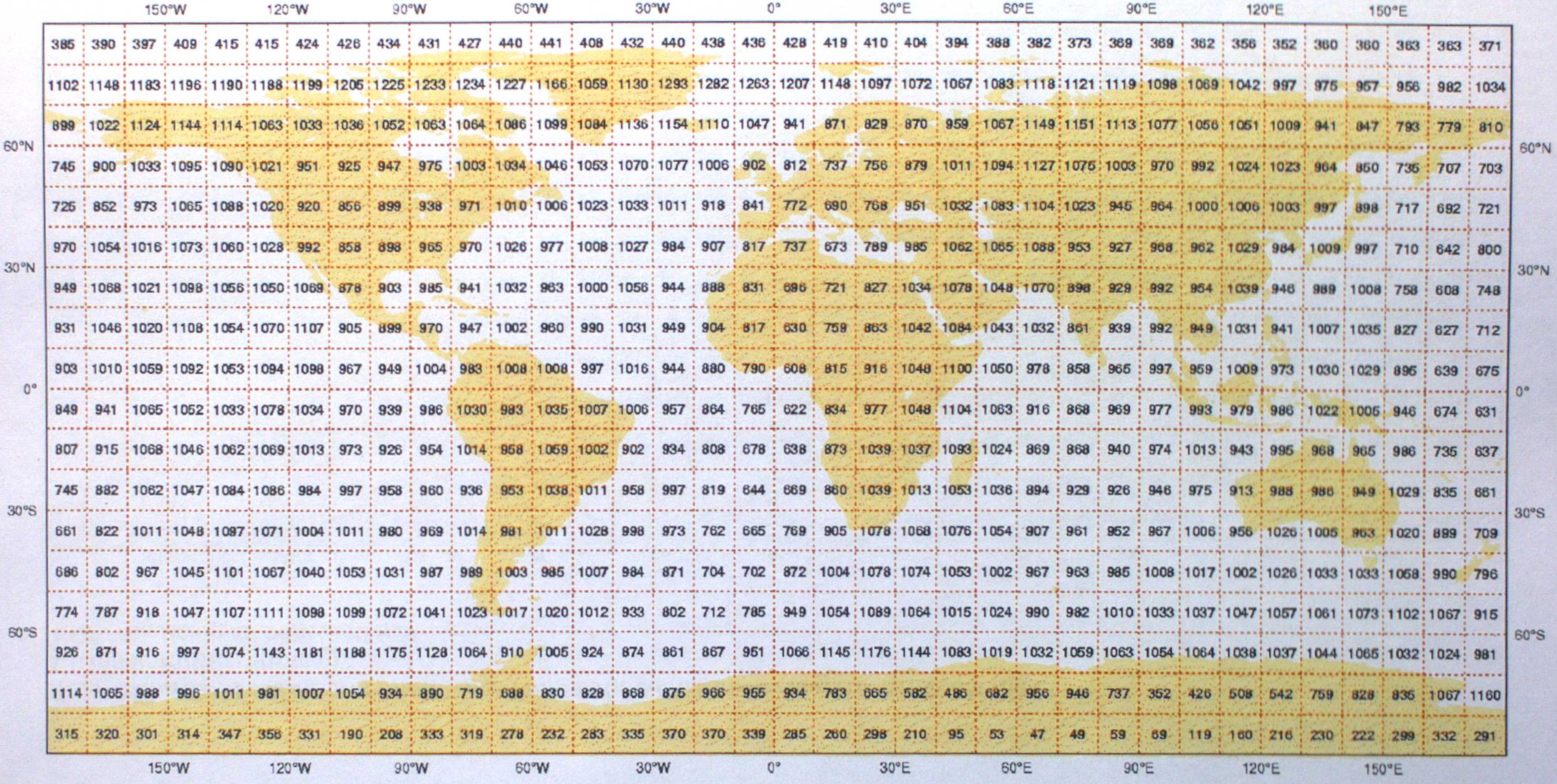
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.4	.5	.4	.4	.4	.4	.4	.4	.4	.4	.4	.5	.5	.4	.4	.4	.4	.3	.3	.4	.4	.4	.4	.4	.4	.4	.5	.5	.4	.4	.4	.4	.4	.4	.4	.4
.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.4	.4	.4	.3	.3	.2	.2	.2	.2	.2	.3	.3	.3	.3	.4	.4	.4	.4	.4	.3	.3	.3	.3	.2	.3	.3
.2	.3	.2	.3	.2	.2	.2	.1	.1	.2	.2	.2	.2	.1	.1	.1	.1	.1	.2	.2	.2	.2	.2	.2	.3	.3	.2	.2	.2	.2	.2	.1	.1	.1	.1	.1
.0	.1	.1	.1	.0	.0	-.1	-.1	-.1	-.1	.0	.0	.0	-.1	.0	-.1	.0	.0	.0	.1	.0	.0	.0	.0	.1	.1	.0	.0	-.1	-.1	-.1	-.1	-.1	-.1	.0	.0
-.1	.0	-.1	-.1	-.1	-.2	-.2	-.2	-.3	-.3	-.2	-.1	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.3	-.3	-.3	-.3	-.3	-.2	-.2	-.2	-.3	-.3	-.3	-.3	-.2	-.2	-.2	.0
-.2	-.2	-.3	-.3	-.4	-.3	-.3	-.3	-.2	-.3	-.2	-.2	-.3	-.3	-.3	-.3	-.3	-.4	-.4	-.4	-.5	-.5	-.4	-.4	-.4	-.4	-.3	-.3	-.3	-.4	-.3	-.4	-.3	-.3	-.2	-.2
-.3	-.4	-.4	-.4	-.5	-.4	-.4	-.4	-.3	-.3	-.3	-.3	-.4	-.4	-.5	-.4	-.4	-.4	-.3	-.4	-.4	-.5	-.4	-.4	-.4	-.4	-.3	-.3	-.3	-.4	-.5	-.4	-.4	-.4	-.3	-.4
-.4	-.5	-.4	-.5	-.5	-.5	-.5	-.4	-.4	-.4	-.3	-.3	-.4	-.4	-.5	-.5	-.4	-.5	-.4	-.6	-.5	-.5	-.6	-.5	-.5	-.4	-.3	-.3	-.3	-.4	-.5	-.4	-.4	-.4	-.4	-.5
-.5	-.5	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.3	-.3	-.4	-.3	-.4	-.4	-.5	-.5	-.4	-.5	-.5	-.5	-.6	-.5	-.4	-.4	-.3	-.4	-.4	-.4	-.5	-.4	-.4	-.4	-.4	-.5
-.4	-.5	-.4	-.4	-.3	-.3	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.3	-.3	-.3	-.3	-.2	-.3	-.2	-.3	-.4	-.4	-.4	-.4	-.4	-.4	-.5	-.5	-.5	-.5	-.5	-.4	-.4	-.4
-.3	-.3	-.2	-.2	-.1	-.2	-.2	-.3	-.2	-.2	-.3	-.3	-.3	-.3	-.3	-.3	-.3	-.3	-.3	-.2	-.1	-.2	-.2	-.3	-.3	-.3	-.3	-.4	-.4	-.4	-.4	-.4	-.4	-.3	-.3	-.3
.0	.1	.1	.1	.1	.0	.0	.0	.0	.0	.0	-.1	-.1	-.1	-.1	-.1	-.2	-.2	-.2	-.1	-.1	-.1	-.1	-.1	-.1	-.1	.0	-.1	-.1	-.1	-.2	-.1	-.1	.0	.0	.0
.1	.2	.2	.2	.2	.1	.1	.1	.1	.1	.0	.0	.0	-.1	-.1	-.1	-.1	.0	.0	.0	.0	.0	.0	-.1	-.1	.0	.0	.1	.0	.1	.0	.0	.0	-.1	.0	.1
-.1	.0	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.2	-.3	-.4	-.5	-.5	-.4	-.3	-.3	-.2	-.2	-.2	-.3	-.3	-.4	-.4	-.3	-.3	-.3	-.2	-.2	-.2	-.3	-.3	-.3	-.2	-.1
-.5	-.5	-.4	-.5	-.5	-.6	-.5	-.5	-.5	-.5	-.6	-.7	-.8	-.9	-.8	-.8	-.8	-.7	-.6	-.6	-.6	-.7	-.7	-.8	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.6
-.8	-.8	-.8	-.8	-.8	-.9	-.9	-.8	-.9	-.9	-.9	-.9	-.9	-.9	-.9	-.9	-.9	-.9	-.9	-.9	-.9	-.9	-.9	-.9	-.9	-.9	-.9	-.9	-.9	-.9	-.9	-.9	-.9	-.8	-.9	-.9
-.7	-.6	-.6	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.8	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.8	-.8	-.8	-.8	-.7	-.7	-.7	-.7	-.8	-.8	-.8	-.8	-.7	-.7	-.7	-.7	-.7	-.7

Figure 54. ATOVS SD O-B brightness temperature differences (deg C). AUGUST 2006
Channel: AMSUA-9 (100 hPa)
NOAA16, using all observations



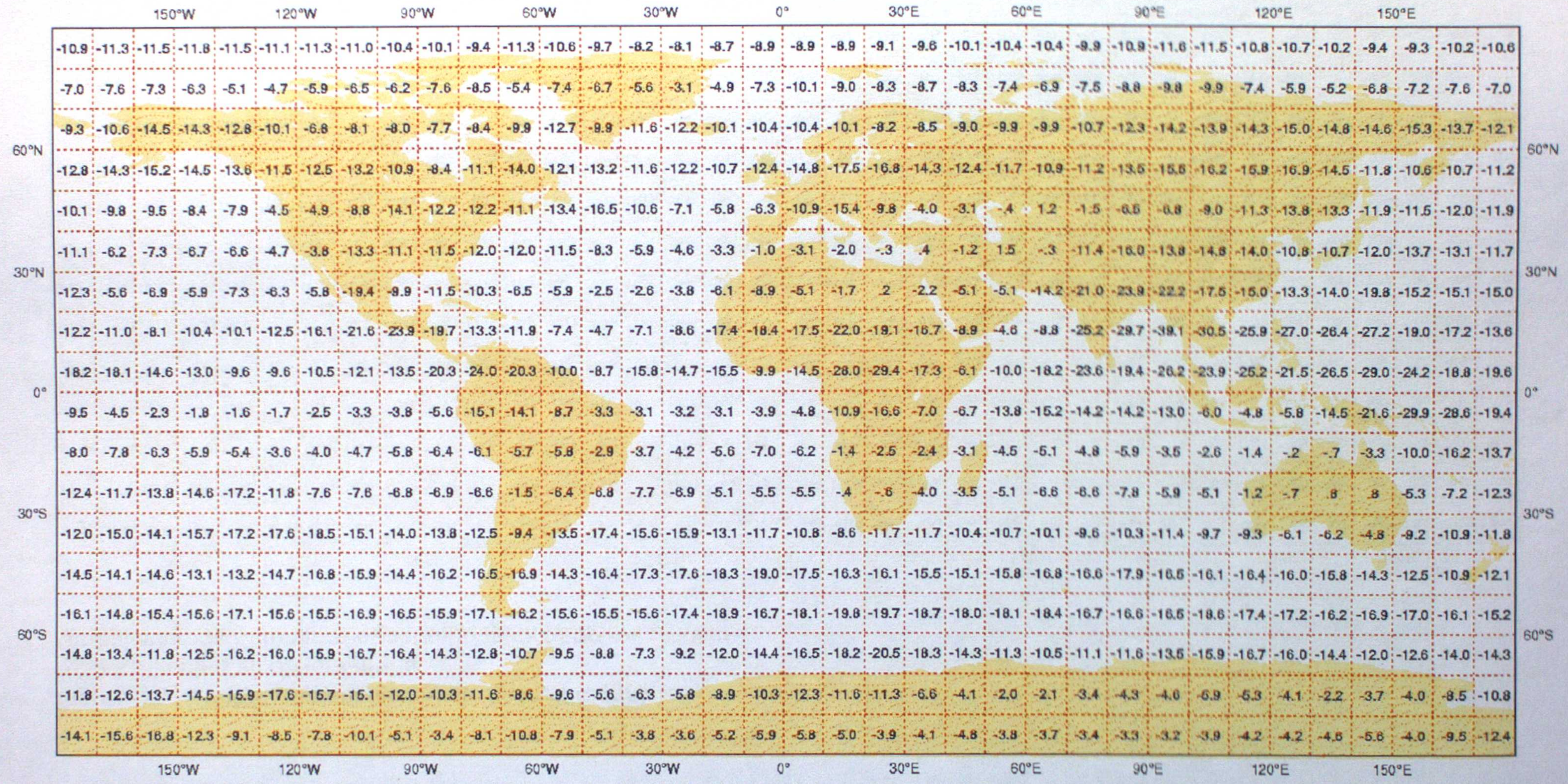
.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2
.3	.2	.2	.2	.2	.2	.2	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.2	.2	.2	.2	.2	.2	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.2	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.2	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.4	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.4	.4	.3	.3	.3	.3	.3	.3	.3	.4	.4	.3	.4	.3	.3	.3	.3	.3	.3	.4	.4	.3	.3	.3	.3	.3	.4	.4	.3	.4	.3	.3
.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4
.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.4	.4	.4	.4	.4	.4
.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4
.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2

Figure 55. ATOVS mean daily count. AUGUST 2006
NOAA18, using all observations
Global average number of observations in 24 hours = 579364



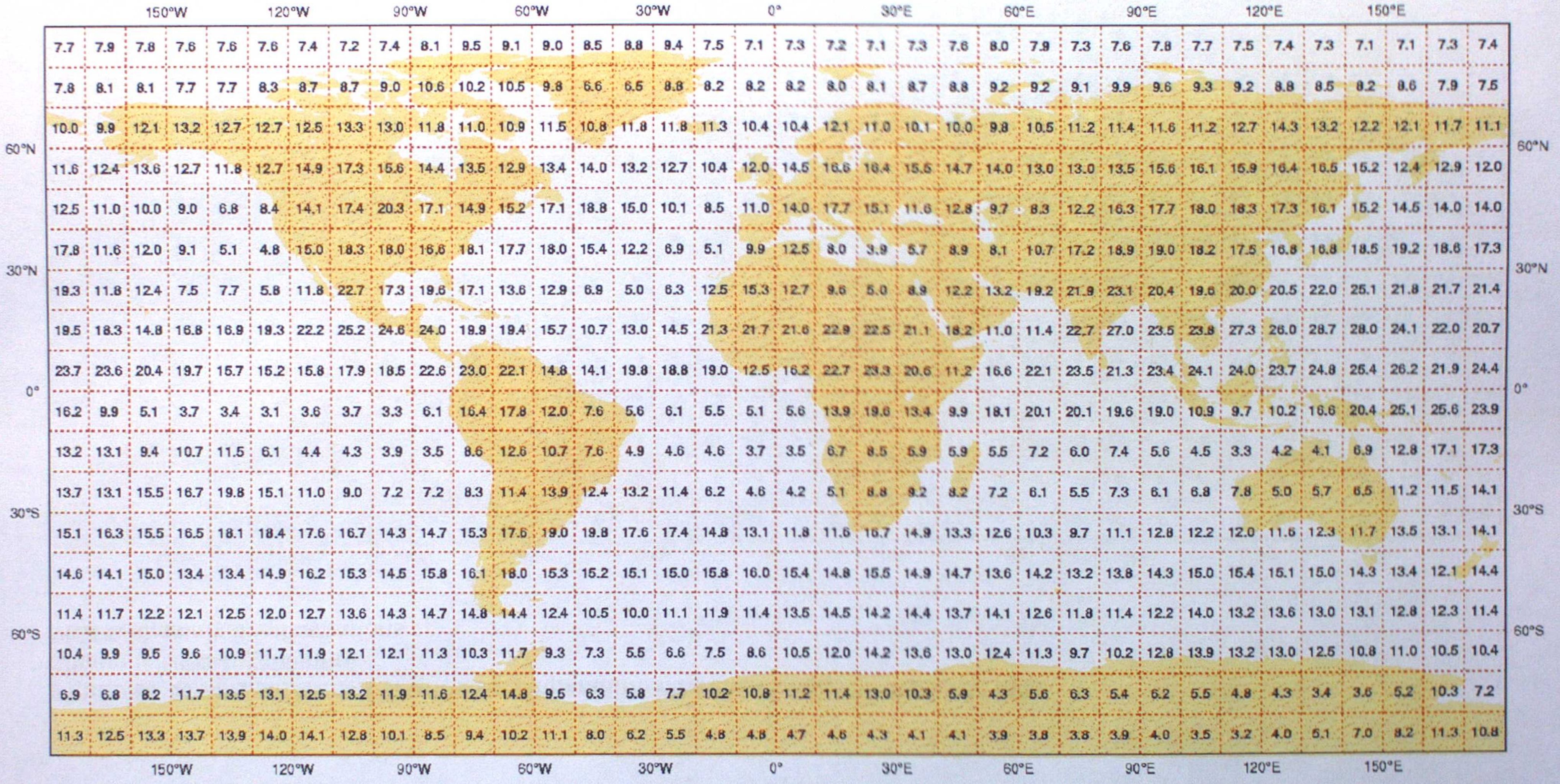
385	390	397	409	415	415	424	426	434	431	427	440	441	408	432	440	438	436	428	419	410	404	394	388	382	373	369	369	362	356	352	360	360	363	363	371
1102	1148	1183	1196	1190	1188	1199	1205	1225	1233	1234	1227	1166	1059	1130	1293	1282	1263	1207	1148	1097	1072	1067	1083	1118	1121	1119	1098	1069	1042	997	975	957	956	982	1034
899	1022	1124	1144	1114	1063	1033	1036	1052	1063	1064	1086	1099	1084	1136	1154	1110	1047	941	871	829	870	959	1067	1149	1151	1113	1077	1056	1051	1009	941	847	793	779	810
745	900	1033	1095	1090	1021	951	925	947	975	1003	1034	1046	1053	1070	1077	1006	902	812	737	756	879	1011	1094	1127	1075	1003	970	992	1024	1023	964	850	735	707	703
725	852	973	1065	1088	1020	920	856	899	938	971	1010	1006	1023	1033	1011	918	841	772	690	768	951	1032	1083	1104	1023	945	964	1000	1006	1003	997	898	717	692	721
970	1054	1016	1073	1060	1028	992	858	898	965	970	1026	977	1008	1027	984	907	817	737	673	789	985	1062	1065	1088	953	927	968	962	1029	984	1009	997	710	642	800
949	1068	1021	1098	1056	1050	1069	878	903	985	941	1032	963	1000	1056	944	888	831	696	721	827	1034	1078	1048	1070	898	929	892	954	1039	946	989	1008	758	608	748
931	1046	1020	1108	1054	1070	1107	905	899	970	947	1002	960	990	1031	949	904	817	630	759	863	1042	1084	1043	1032	861	939	992	949	1031	941	1007	1035	827	627	712
903	1010	1059	1092	1053	1094	1098	967	949	1004	983	1008	1008	997	1016	944	880	790	608	815	916	1048	1100	1050	978	858	965	997	959	1009	973	1030	1029	896	639	675
849	941	1065	1052	1033	1078	1034	970	939	986	1030	983	1035	1007	1006	957	864	765	622	834	977	1048	1104	1063	916	868	969	977	993	979	986	1022	1005	946	674	631
807	915	1068	1046	1062	1069	1013	973	926	954	1014	958	1059	1002	902	934	808	678	638	873	1039	1037	1093	1024	869	868	940	974	1013	943	995	968	965	986	735	637
745	882	1062	1047	1084	1086	984	997	958	960	936	953	1038	1011	958	997	819	644	669	860	1039	1013	1053	1036	894	929	926	946	975	913	988	986	949	1029	835	661
661	822	1011	1048	1097	1071	1004	1011	980	969	1014	981	1011	1028	998	973	762	665	769	905	1078	1068	1076	1054	907	961	952	967	1006	956	1026	1005	963	1020	899	709
686	802	967	1045	1101	1067	1040	1053	1031	987	989	1003	985	1007	984	871	704	702	872	1004	1078	1074	1053	1002	967	963	985	1008	1017	1002	1026	1033	1033	1058	990	796
774	787	918	1047	1107	1111	1098	1099	1072	1041	1023	1017	1020	1012	933	802	712	785	949	1054	1089	1064	1015	1024	990	982	1010	1033	1037	1047	1057	1061	1073	1102	1067	915
926	871	916	997	1074	1143	1181	1188	1175	1128	1064	910	1005	924	874	861	867	951	1066	1145	1176	1144	1083	1019	1032	1059	1063	1054	1064	1038	1037	1044	1065	1032	1024	981
1114	1065	988	996	1011	981	1007	1054	934	890	719	688	830	828	868	875	966	955	934	783	665	582	486	682	956	946	737	352	426	508	542	759	828	835	1067	1160
315	320	301	314	347	356	331	190	208	333	319	278	232	283	335	370	370	339	285	260	298	210	95	53	47	49	59	69	119	160	216	230	222	299	332	291

Figure 56. ATOVS MEAN O-B brightness temperature differences (deg C). AUGUST 2006
Channel: HIRS8 (Surface)
NOAA18, using all observations



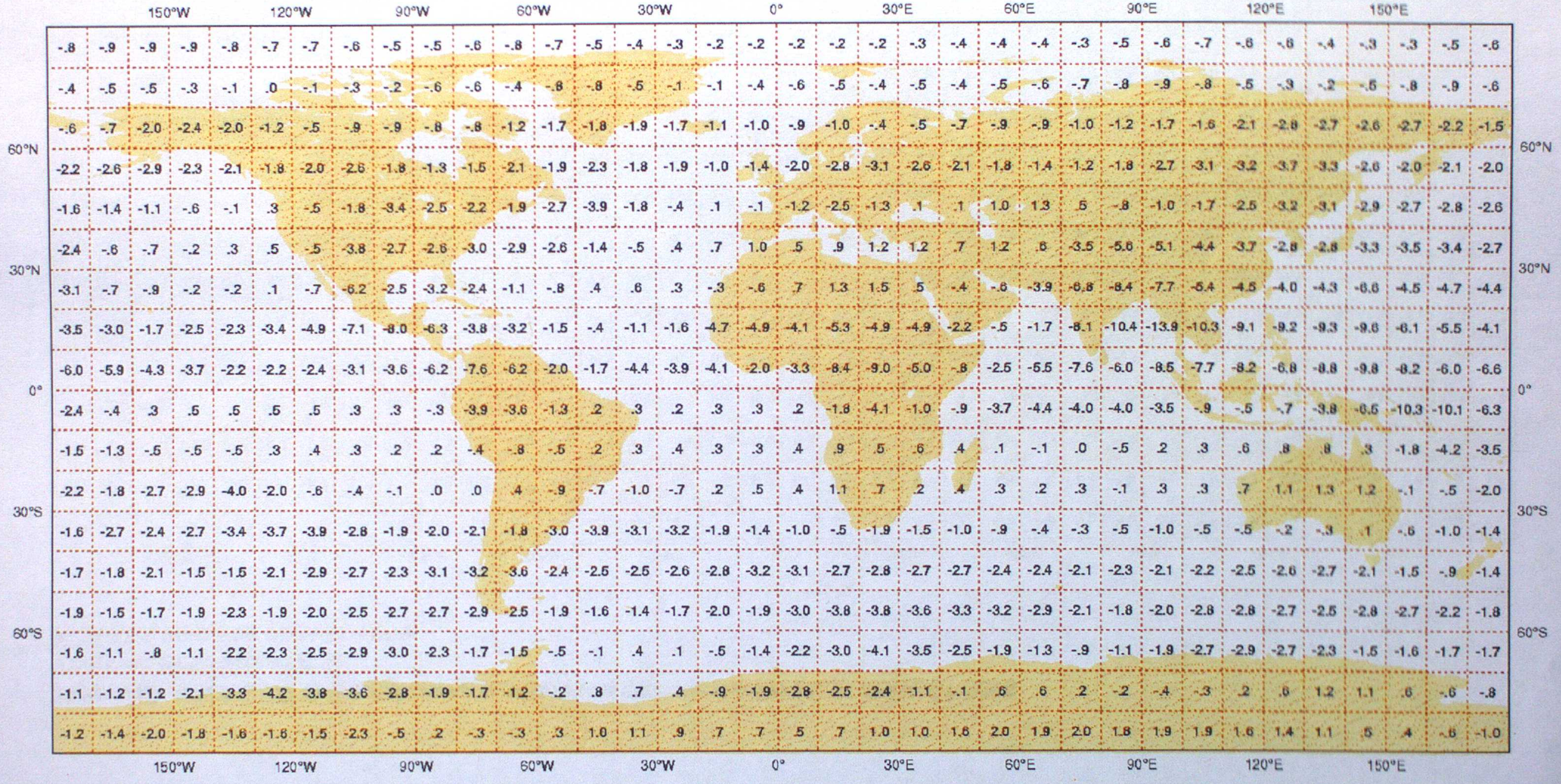
-10.9	-11.3	-11.5	-11.8	-11.5	-11.1	-11.3	-11.0	-10.4	-10.1	-9.4	-11.3	-10.6	-9.7	-8.2	-8.1	-8.7	-8.9	-8.9	-8.9	-9.1	-9.6	-10.1	-10.4	-10.4	-9.9	-10.9	-11.6	-11.5	-10.8	-10.7	-10.2	-9.4	-9.3	-10.2	-10.6
-7.0	-7.6	-7.3	-6.3	-5.1	-4.7	-5.9	-6.5	-6.2	-7.6	-8.5	-5.4	-7.4	-6.7	-5.6	-3.1	-4.9	-7.3	-10.1	-9.0	-8.3	-8.7	-8.3	-7.4	-6.9	-7.5	-8.8	-9.8	-9.9	-7.4	-5.9	-5.2	-6.8	-7.2	-7.6	-7.0
-9.3	-10.6	-14.5	-14.3	-12.8	-10.1	-6.8	-8.1	-8.0	-7.7	-8.4	-9.9	-12.7	-9.9	-11.6	-12.2	-10.1	-10.4	-10.4	-10.1	-8.2	-8.5	-9.0	-9.9	-9.9	-10.7	-12.3	-14.2	-13.9	-14.3	-15.0	-14.8	-14.6	-15.3	-13.7	-12.1
-12.8	-14.3	-15.2	-14.5	-13.6	-11.5	-12.5	-13.2	-10.9	-8.4	-11.1	-14.0	-12.1	-13.2	-11.6	-12.2	-10.7	-12.4	-14.8	-17.5	-16.8	-14.3	-12.4	-11.7	-10.9	-11.2	-13.5	-15.6	-16.2	-15.9	-16.9	-14.5	-11.8	-10.6	-10.7	-11.2
-10.1	-9.8	-9.5	-8.4	-7.9	-4.5	-4.9	-8.8	-14.1	-12.2	-12.2	-11.1	-13.4	-16.5	-10.6	-7.1	-5.8	-6.3	-10.9	-15.4	-9.8	-4.0	-3.1	-.4	1.2	-1.5	-6.5	-6.8	-9.0	-11.3	-13.8	-13.3	-11.9	-11.5	-12.0	-11.9
-11.1	-6.2	-7.3	-6.7	-6.6	-4.7	-3.8	-13.3	-11.1	-11.5	-12.0	-12.0	-11.5	-8.3	-5.9	-4.6	-3.3	-1.0	-3.1	-2.0	-.3	.4	-1.2	1.5	-.3	-11.4	-16.0	-13.8	-14.8	-14.0	-10.8	-10.7	-12.0	-13.7	-13.1	-11.7
-12.3	-5.6	-6.9	-5.9	-7.3	-6.3	-5.8	-19.4	-9.9	-11.5	-10.3	-6.5	-5.9	-2.5	-2.6	-3.8	-6.1	-8.9	-5.1	-1.7	.2	-2.2	-5.1	-5.1	-14.2	-21.0	-23.9	-22.2	-17.5	-15.0	-13.3	-14.0	-19.8	-15.2	-15.1	-15.0
-12.2	-11.0	-8.1	-10.4	-10.1	-12.5	-16.1	-21.6	-23.9	-19.7	-13.3	-11.9	-7.4	-4.7	-7.1	-8.6	-17.4	-18.4	-17.5	-22.0	-19.1	-16.7	-8.9	-4.6	-8.8	-25.2	-29.7	-39.1	-30.5	-25.9	-27.0	-26.4	-27.2	-19.0	-17.2	-13.6
-18.2	-18.1	-14.6	-13.0	-9.6	-9.6	-10.5	-12.1	-13.5	-20.3	-24.0	-20.3	-10.0	-8.7	-15.8	-14.7	-15.5	-9.9	-14.5	-28.0	-29.4	-17.3	-6.1	-10.0	-18.2	-23.6	-19.4	-26.2	-23.9	-25.2	-21.5	-26.5	-29.0	-24.2	-18.8	-19.6
-9.5	-4.5	-2.3	-1.8	-1.6	-1.7	-2.5	-3.3	-3.8	-5.6	-15.1	-14.1	-8.7	-3.3	-3.1	-3.2	-3.1	-3.9	-4.8	-10.9	-16.6	-7.0	-6.7	-13.8	-15.2	-14.2	-14.2	-13.0	-6.0	-4.8	-5.8	-14.5	-21.6	-29.9	-28.6	-19.4
-8.0	-7.8	-6.3	-5.9	-5.4	-3.6	-4.0	-4.7	-5.8	-6.4	-6.1	-5.7	-5.8	-2.9	-3.7	-4.2	-5.6	-7.0	-6.2	-1.4	-2.5	-2.4	-3.1	-4.5	-5.1	-4.8	-5.9	-3.5	-2.6	-1.4	-.2	-.7	-3.3	-10.0	-16.2	-13.7
-12.4	-11.7	-13.8	-14.6	-17.2	-11.8	-7.6	-7.6	-6.8	-6.9	-6.6	-1.5	-6.4	-6.8	-7.7	-6.9	-5.1	-5.5	-5.5	-.4	-.6	-4.0	-3.5	-5.1	-6.6	-6.6	-7.8	-5.9	-5.1	-1.2	-.7	.8	.8	-5.3	-7.2	-12.3
-12.0	-15.0	-14.1	-15.7	-17.2	-17.6	-18.5	-15.1	-14.0	-13.8	-12.5	-9.4	-13.5	-17.4	-15.6	-15.9	-13.1	-11.7	-10.8	-8.6	-11.7	-11.7	-10.4	-10.7	-10.1	-9.6	-10.3	-11.4	-9.7	-9.3	-6.1	-6.2	-4.8	-9.2	-10.9	-11.8
-14.5	-14.1	-14.6	-13.1	-13.2	-14.7	-16.8	-15.9	-14.4	-16.2	-16.5	-16.9	-14.3	-16.4	-17.3	-17.6	-18.3	-19.0	-17.5	-16.3	-16.1	-15.5	-15.1	-15.8	-16.8	-16.6	-17.9	-16.5	-16.1	-16.4	-16.0	-15.8	-14.3	-12.5	-10.9	-12.1
-16.1	-14.8	-15.4	-15.6	-17.1	-15.6	-15.5	-16.9	-16.5	-15.9	-17.1	-16.2	-15.6	-15.5	-15.6	-17.4	-18.9	-16.7	-18.1	-19.8	-19.7	-18.7	-18.0	-18.1	-18.4	-16.7	-16.6	-16.5	-18.6	-17.4	-17.2	-16.2	-16.9	-17.0	-16.1	-15.2
-14.8	-13.4	-11.8	-12.5	-16.2	-16.0	-15.9	-16.7	-16.4	-14.3	-12.8	-10.7	-9.5	-8.8	-7.3	-9.2	-12.0	-14.4	-16.5	-18.2	-20.5	-18.3	-14.3	-11.3	-10.5	-11.1	-11.6	-13.5	-15.9	-16.7	-16.0	-14.4	-12.0	-12.6	-14.0	-14.3
-11.8	-12.6	-13.7	-14.5	-15.9	-17.6	-15.7	-15.1	-12.0	-10.3	-11.6	-8.6	-9.6	-5.6	-6.3	-5.8	-8.9	-10.3	-12.3	-11.6	-11.3	-6.6	-4.1	-2.0	-2.1	-3.4	-4.3	-4.0	-6.9	-5.3	-4.1	-2.2	-3.7	-4.0	-8.5	-10.8
-14.1	-15.6	-16.8	-12.3	-9.1	-8.5	-7.8	-10.1	-5.1	-3.4	-8.1	-10.8	-7.9	-5.1	-3.8	-3.6	-5.2	-5.9	-5.8	-5.0	-3.9	-4.1	-4.8	-3.8	-3.7	-3.4	-3.3	-3.2	-3.9	-4.2	-4.2	-4.6	-5.6	-4.0	-9.5	-12.4

Figure 57. ATOVS SD O-B brightness temperature differences (deg C). AUGUST 2006
Channel: HIRS8 (Surface)
NOAA18, using all observations



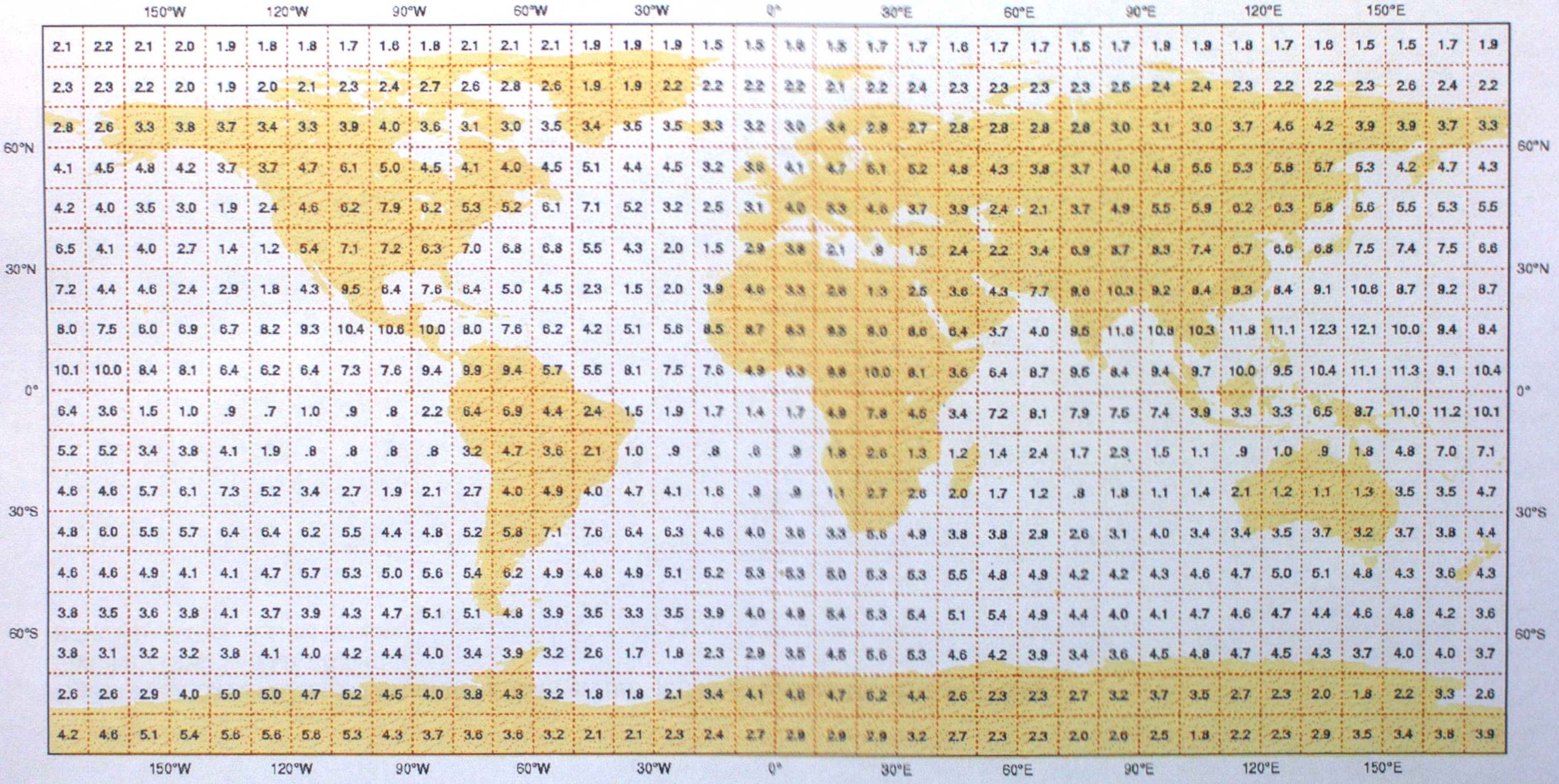
7.7	7.9	7.8	7.6	7.6	7.6	7.4	7.2	7.4	8.1	9.5	9.1	9.0	8.5	8.8	9.4	7.5	7.1	7.3	7.2	7.1	7.3	7.6	8.0	7.9	7.3	7.6	7.8	7.7	7.5	7.4	7.3	7.1	7.1	7.3	7.4
7.8	8.1	8.1	7.7	7.7	8.3	8.7	8.7	9.0	10.6	10.2	10.5	9.8	6.6	6.5	8.8	8.2	8.2	8.2	8.0	8.1	8.7	8.8	9.2	9.2	9.1	9.9	9.6	9.3	9.2	8.8	8.5	8.2	8.6	7.9	7.5
10.0	9.9	12.1	13.2	12.7	12.7	12.5	13.3	13.0	11.8	11.0	10.9	11.5	10.8	11.8	11.8	11.3	10.4	10.4	12.1	11.0	10.1	10.0	9.8	10.5	11.2	11.4	11.6	11.2	12.7	14.3	13.2	12.2	12.1	11.7	11.1
11.6	12.4	13.6	12.7	11.8	12.7	14.9	17.3	15.6	14.4	13.5	12.9	13.4	14.0	13.2	12.7	10.4	12.0	14.5	16.6	16.4	15.6	14.7	14.0	13.0	13.0	13.5	15.6	16.1	15.9	16.4	16.5	15.2	12.4	12.9	12.0
12.5	11.0	10.0	9.0	6.8	8.4	14.1	17.4	20.3	17.1	14.9	15.2	17.1	18.8	15.0	10.1	8.5	11.0	14.0	17.7	15.1	11.6	12.8	9.7	8.3	12.2	16.3	17.7	18.0	18.3	17.3	16.1	15.2	14.5	14.0	14.0
17.8	11.6	12.0	9.1	5.1	4.8	15.0	18.3	18.0	16.6	18.1	17.7	18.0	15.4	12.2	6.9	5.1	9.9	12.5	8.0	3.9	5.7	8.9	8.1	10.7	17.2	18.9	19.0	18.2	17.5	16.8	16.8	18.5	19.2	18.6	17.3
19.3	11.8	12.4	7.5	7.7	5.8	11.8	22.7	17.3	19.6	17.1	13.6	12.9	6.9	5.0	6.3	12.5	15.3	12.7	9.6	5.0	8.9	12.2	13.2	19.2	21.9	23.1	20.4	19.6	20.0	20.5	22.0	25.1	21.8	21.7	21.4
19.5	18.3	14.8	16.8	16.9	19.3	22.2	25.2	24.6	24.0	19.9	19.4	15.7	10.7	13.0	14.5	21.3	21.7	21.6	22.9	22.5	21.1	18.2	11.0	11.4	22.7	27.0	23.5	23.8	27.3	26.0	28.7	28.0	24.1	22.0	20.7
23.7	23.6	20.4	19.7	15.7	15.2	15.8	17.9	18.5	22.6	23.0	22.1	14.8	14.1	19.8	18.8	19.0	12.5	16.2	22.7	23.3	20.6	11.2	16.6	22.1	23.5	21.3	23.4	24.1	24.0	23.7	24.8	25.4	26.2	21.9	24.4
16.2	9.9	5.1	3.7	3.4	3.1	3.6	3.7	3.3	6.1	16.4	17.8	12.0	7.6	5.6	6.1	5.5	5.1	5.6	13.9	19.6	13.4	9.9	18.1	20.1	20.1	19.6	19.0	10.9	9.7	10.2	16.6	20.4	25.1	25.6	23.9
13.2	13.1	9.4	10.7	11.5	6.1	4.4	4.3	3.9	3.5	8.6	12.6	10.7	7.6	4.9	4.6	4.6	3.7	3.5	6.7	8.5	5.9	5.9	5.5	7.2	6.0	7.4	5.6	4.5	3.3	4.2	4.1	6.9	12.8	17.1	17.3
13.7	13.1	15.5	16.7	19.8	15.1	11.0	9.0	7.2	7.2	8.3	11.4	13.9	12.4	13.2	11.4	6.2	4.6	4.2	5.1	8.8	9.2	8.2	7.2	6.1	5.5	7.3	6.1	6.8	7.8	5.0	5.7	6.5	11.2	11.5	14.1
15.1	16.3	15.5	16.5	18.1	18.4	17.6	16.7	14.3	14.7	15.3	17.6	19.0	19.8	17.6	17.4	14.8	13.1	11.8	11.6	16.7	14.9	13.3	12.6	10.3	9.7	11.1	12.8	12.2	12.0	11.6	12.3	11.7	13.5	13.1	14.1
14.6	14.1	15.0	13.4	13.4	14.9	16.2	15.3	14.5	15.8	16.1	18.0	15.3	15.2	15.1	15.0	15.8	16.0	15.4	14.8	15.5	14.9	14.7	13.6	14.2	13.2	13.8	14.3	15.0	15.4	15.1	15.0	14.3	13.4	12.1	14.4
11.4	11.7	12.2	12.1	12.5	12.0	12.7	13.6	14.3	14.7	14.8	14.4	12.4	10.5	10.0	11.1	11.9	11.4	13.5	14.5	14.2	14.4	13.7	14.1	12.6	11.8	11.4	12.2	14.0	13.2	13.6	13.0	13.1	12.8	12.3	11.4
10.4	9.9	9.5	9.6	10.9	11.7	11.9	12.1	12.1	11.3	10.3	11.7	9.3	7.3	5.5	6.6	7.5	8.6	10.5	12.0	14.2	13.6	13.0	12.4	11.3	9.7	10.2	12.8	13.9	13.2	13.0	12.5	10.8	11.0	10.5	10.4
6.9	6.8	8.2	11.7	13.5	13.1	12.5	13.2	11.9	11.6	12.4	14.8	9.5	6.3	5.8	7.7	10.2	10.8	11.2	11.4	13.0	10.3	5.9	4.3	5.6	6.3	5.4	6.2	5.5	4.8	4.3	3.4	3.6	5.2	10.3	7.2
11.3	12.5	13.3	13.7	13.9	14.0	14.1	12.8	10.1	8.5	9.4	10.2	11.1	8.0	6.2	5.5	4.8	4.8	4.7	4.6	4.3	4.1	4.1	3.9	3.8	3.8	3.9	4.0	3.5	3.2	4.0	5.1	7.0	8.2	11.3	10.8

Figure 58. ATOVS MEAN O-B brightness temperature differences (deg C). AUGUST 2006
Channel: HIRS15 (700 hPa)
NOAA18, using all observations



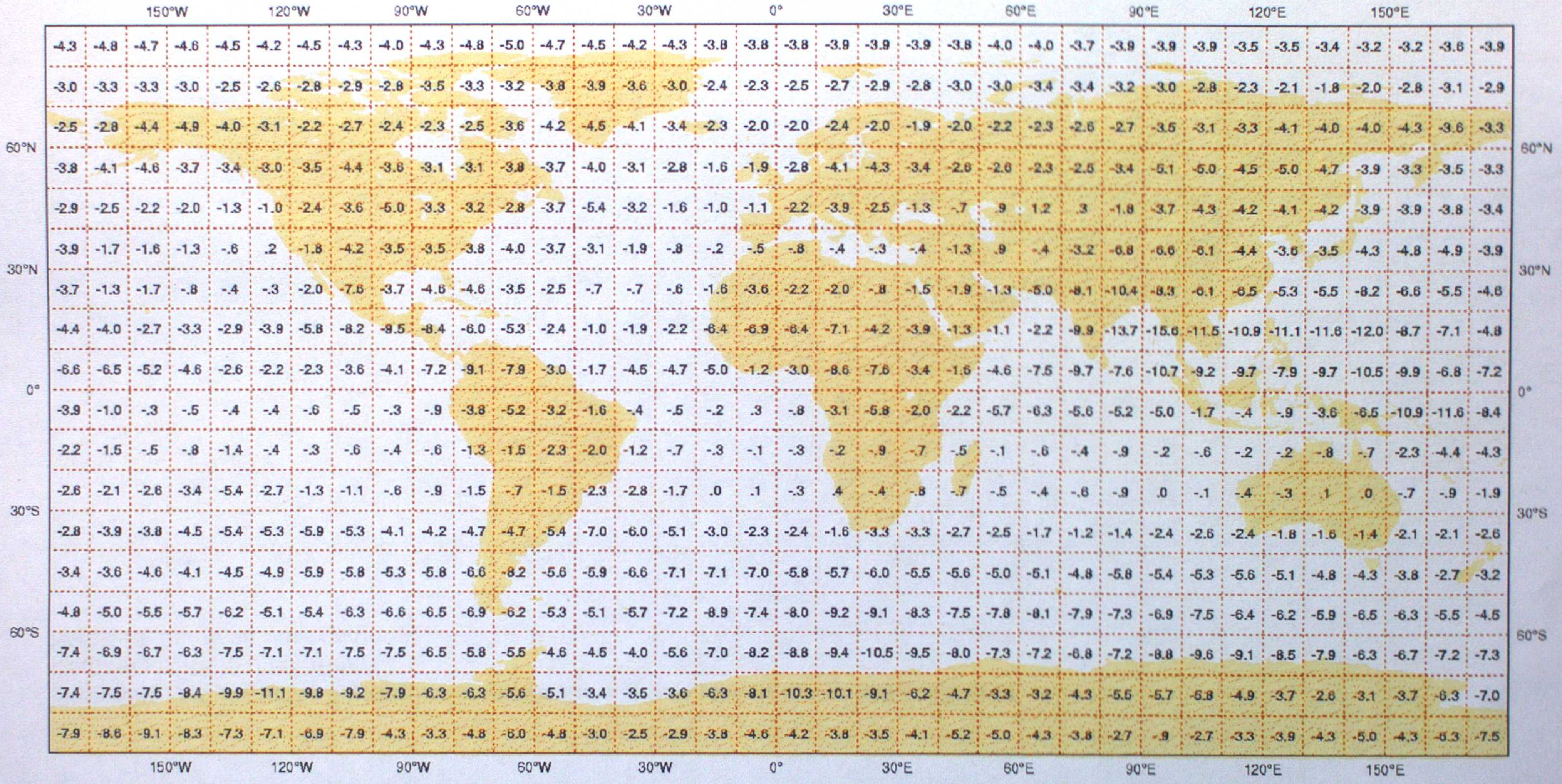
-.8	-.9	-.9	-.9	-.8	-.7	-.7	-.6	-.5	-.5	-.6	-.8	-.7	-.5	-.4	-.3	-.2	-.2	-.2	-.2	-.2	-.3	-.4	-.4	-.4	-.3	-.5	-.6	-.7	-.6	-.6	-.4	-.3	-.3	-.5	-.6
-.4	-.5	-.5	-.3	-.1	.0	-.1	-.3	-.2	-.6	-.6	-.4	-.8	-.8	-.5	-.1	-.1	-.4	-.6	-.5	-.4	-.5	-.4	-.5	-.6	-.7	-.8	-.9	-.8	-.5	-.3	-.2	-.5	-.8	-.9	-.6
-.6	-.7	-2.0	-2.4	-2.0	-1.2	-.5	-.9	-.9	-.8	-.8	-1.2	-1.7	-1.8	-1.9	-1.7	-1.1	-1.0	-.9	-1.0	-.4	-.5	-.7	-.9	-.9	-1.0	-1.2	-1.7	-1.6	-2.1	-2.8	-2.7	-2.6	-2.7	-2.2	-1.5
-2.2	-2.6	-2.9	-2.3	-2.1	-1.8	-2.0	-2.6	-1.8	-1.3	-1.5	-2.1	-1.9	-2.3	-1.8	-1.9	-1.0	-1.4	-2.0	-2.8	-3.1	-2.6	-2.1	-1.8	-1.4	-1.2	-1.8	-2.7	-3.1	-3.2	-3.7	-3.3	-2.6	-2.0	-2.1	-2.0
-1.6	-1.4	-1.1	-.6	-.1	.3	-.5	-1.8	-3.4	-2.5	-2.2	-1.9	-2.7	-3.9	-1.8	-.4	.1	-.1	-1.2	-2.5	-1.3	.1	.1	1.0	1.3	.5	-.8	-1.0	-1.7	-2.5	-3.2	-3.1	-2.9	-2.7	-2.8	-2.6
-2.4	-.6	-.7	-.2	.3	.5	-.5	-3.8	-2.7	-2.6	-3.0	-2.9	-2.6	-1.4	-.5	.4	.7	1.0	.5	.9	1.2	1.2	.7	1.2	.6	-3.5	-5.6	-5.1	-4.4	-3.7	-2.8	-2.8	-3.3	-3.5	-3.4	-2.7
-3.1	-.7	-.9	-.2	-.2	.1	-.7	-6.2	-2.5	-3.2	-2.4	-1.1	-.8	.4	.6	.3	-.3	-.6	.7	1.3	1.5	.5	-.4	-.6	-3.9	-6.8	-8.4	-7.7	-6.4	-4.5	-4.0	-4.3	-6.6	-4.5	-4.7	-4.4
-3.5	-3.0	-1.7	-2.5	-2.3	-3.4	-4.9	-7.1	-8.0	-6.3	-3.8	-3.2	-1.5	-.4	-1.1	-1.6	-4.7	-4.9	-4.1	-5.3	-4.9	-4.9	-2.2	-.5	-1.7	-8.1	-10.4	-13.9	-10.3	-9.1	-9.2	-9.3	-9.6	-6.1	-5.5	-4.1
-6.0	-5.9	-4.3	-3.7	-2.2	-2.2	-2.4	-3.1	-3.6	-6.2	-7.6	-6.2	-2.0	-1.7	-4.4	-3.9	-4.1	-2.0	-3.3	-8.4	-9.0	-5.0	-.8	-2.5	-5.5	-7.6	-6.0	-8.5	-7.7	-8.2	-6.8	-8.8	-9.8	-8.2	-6.0	-6.6
-2.4	-.4	.3	.5	.5	.5	.5	.3	.3	-.3	-3.9	-3.6	-1.3	.2	.3	.2	.3	.3	.2	-1.8	-4.1	-1.0	-.9	-3.7	-4.4	-4.0	-4.0	-3.5	-.9	-.5	-.7	-3.8	-6.5	-10.3	-10.1	-6.3
-1.5	-1.3	-.5	-.5	-.5	.3	.4	.3	.2	.2	-.4	-.8	-.5	.2	.3	.4	.3	.3	.4	.9	.5	.6	.4	.1	-.1	.0	-.5	.2	.3	.6	.8	.8	.3	-1.8	-4.2	-3.5
-2.2	-1.8	-2.7	-2.9	-4.0	-2.0	-.6	-.4	-.1	.0	.0	.4	-.9	-.7	-1.0	-.7	.2	.5	.4	1.1	.7	.2	.4	.3	.2	.3	-.1	.3	.3	.7	1.1	1.3	1.2	-.1	-.5	-2.0
-1.6	-2.7	-2.4	-2.7	-3.4	-3.7	-3.9	-2.8	-1.9	-2.0	-2.1	-1.8	-3.0	-3.9	-3.1	-3.2	-1.9	-1.4	-1.0	-.5	-1.9	-1.5	-1.0	-.9	-.4	-.3	-.5	-1.0	-.5	-.5	-.2	-.3	.1	-.6	-1.0	-1.4
-1.7	-1.8	-2.1	-1.5	-1.5	-2.1	-2.9	-2.7	-2.3	-3.1	-3.2	-3.6	-2.4	-2.5	-2.5	-2.6	-2.8	-3.2	-3.1	-2.7	-2.8	-2.7	-2.7	-2.4	-2.4	-2.1	-2.3	-2.1	-2.2	-2.5	-2.6	-2.7	-2.1	-1.5	-.9	-1.4
-1.9	-1.5	-1.7	-1.9	-2.3	-1.9	-2.0	-2.5	-2.7	-2.7	-2.9	-2.5	-1.9	-1.6	-1.4	-1.7	-2.0	-1.9	-3.0	-3.8	-3.8	-3.6	-3.3	-3.2	-2.9	-2.1	-1.8	-2.0	-2.8	-2.8	-2.7	-2.5	-2.8	-2.7	-2.2	-1.8
-1.6	-1.1	-.8	-1.1	-2.2	-2.3	-2.5	-2.9	-3.0	-2.3	-1.7	-1.5	-.5	-.1	.4	.1	-.5	-1.4	-2.2	-3.0	-4.1	-3.5	-2.5	-1.9	-1.3	-.9	-1.1	-1.9	-2.7	-2.9	-2.7	-2.3	-1.5	-1.6	-1.7	-1.7
-1.1	-1.2	-1.2	-2.1	-3.3	-4.2	-3.8	-3.6	-2.8	-1.9	-1.7	-1.2	-.2	.8	.7	.4	-.9	-1.9	-2.8	-2.5	-2.4	-1.1	-.1	.6	.6	.2	-.2	-.4	-.3	.2	.6	1.2	1.1	.6	-.6	-.8
-1.2	-1.4	-2.0	-1.8	-1.6	-1.6	-1.5	-2.3	-.5	.2	-.3	-.3	.3	1.0	1.1	.9	.7	.7	.5	.7	1.0	1.0	1.6	2.0	1.9	2.0	1.8	1.9	1.9	1.6	1.4	1.1	.5	.4	-.6	-1.0

Figure 59. ATOVS SD O-B brightness temperature differences (deg C). AUGUST 2006
Channel: HIRS15 (700 hPa)
NOAA18, using all observations



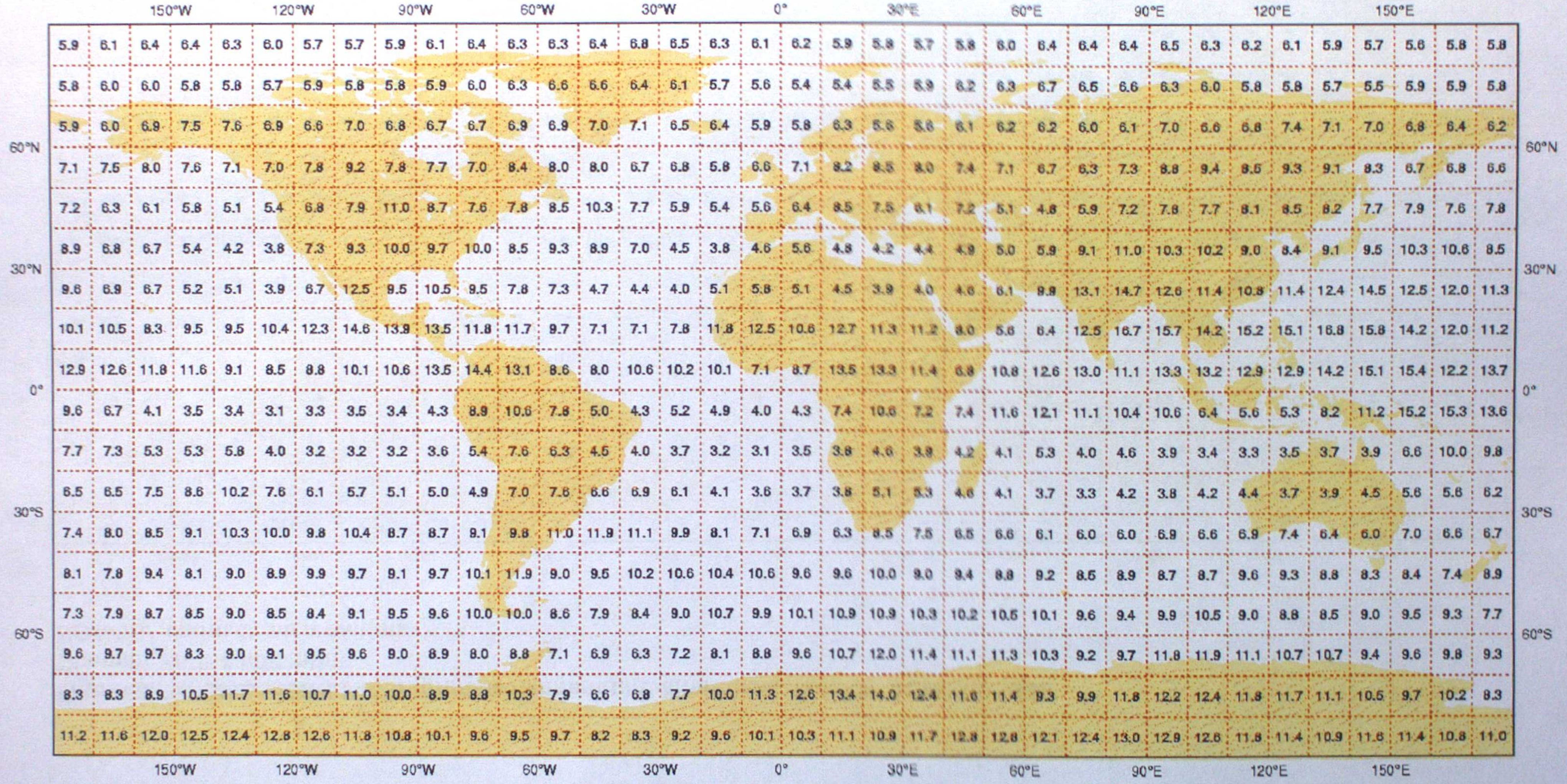
2.1	2.2	2.1	2.0	1.9	1.8	1.8	1.7	1.6	1.8	2.1	2.1	2.1	1.9	1.9	1.9	1.5	1.5	1.8	1.5	1.7	1.7	1.6	1.7	1.7	1.5	1.7	1.9	1.9	1.8	1.7	1.6	1.5	1.5	1.7	1.9
2.3	2.3	2.2	2.0	1.9	2.0	2.1	2.3	2.4	2.7	2.6	2.8	2.6	1.9	1.9	2.2	2.2	2.2	2.2	2.1	2.2	2.4	2.3	2.3	2.3	2.3	2.5	2.4	2.4	2.3	2.2	2.2	2.3	2.6	2.4	2.2
2.8	2.6	3.3	3.8	3.7	3.4	3.3	3.9	4.0	3.6	3.1	3.0	3.5	3.4	3.5	3.5	3.3	3.2	3.0	3.4	2.9	2.7	2.8	2.8	2.8	2.8	3.0	3.1	3.0	3.7	4.6	4.2	3.9	3.9	3.7	3.3
4.1	4.5	4.8	4.2	3.7	3.7	4.7	6.1	5.0	4.5	4.1	4.0	4.5	5.1	4.4	4.5	3.2	3.6	4.1	4.7	5.1	5.2	4.8	4.3	3.8	3.7	4.0	4.8	5.5	5.3	5.8	5.7	5.3	4.2	4.7	4.3
4.2	4.0	3.5	3.0	1.9	2.4	4.6	6.2	7.9	6.2	5.3	5.2	6.1	7.1	5.2	3.2	2.5	3.1	4.0	5.3	4.6	3.7	3.9	2.4	2.1	3.7	4.9	5.5	5.9	6.2	6.3	5.8	5.6	5.5	5.3	5.5
6.5	4.1	4.0	2.7	1.4	1.2	5.4	7.1	7.2	6.3	7.0	6.8	6.8	5.5	4.3	2.0	1.5	2.9	3.8	2.1	.9	1.5	2.4	2.2	3.4	6.9	8.7	8.3	7.4	6.7	6.6	6.8	7.5	7.4	7.5	6.6
7.2	4.4	4.6	2.4	2.9	1.8	4.3	9.5	6.4	7.6	6.4	5.0	4.5	2.3	1.5	2.0	3.9	4.6	3.3	2.8	1.3	2.5	3.6	4.3	7.7	9.6	10.3	9.2	8.4	8.3	8.4	9.1	10.6	8.7	9.2	8.7
8.0	7.5	6.0	6.9	6.7	8.2	9.3	10.4	10.6	10.0	8.0	7.6	6.2	4.2	5.1	5.6	8.5	8.7	8.3	9.5	9.0	8.6	6.4	3.7	4.0	9.5	11.6	10.8	10.3	11.8	11.1	12.3	12.1	10.0	9.4	8.4
10.1	10.0	8.4	8.1	6.4	6.2	6.4	7.3	7.6	9.4	9.9	9.4	5.7	5.5	8.1	7.5	7.6	4.9	6.3	9.8	10.0	8.1	3.6	6.4	8.7	9.6	8.4	9.4	9.7	10.0	9.5	10.4	11.1	11.3	9.1	10.4
6.4	3.6	1.5	1.0	.9	.7	1.0	.9	.8	2.2	6.4	6.9	4.4	2.4	1.5	1.9	1.7	1.4	1.7	4.9	7.8	4.6	3.4	7.2	8.1	7.9	7.5	7.4	3.9	3.3	3.3	6.5	8.7	11.0	11.2	10.1
5.2	5.2	3.4	3.8	4.1	1.9	.8	.8	.8	.8	3.2	4.7	3.6	2.1	1.0	.9	.8	.8	.9	1.8	2.6	1.3	1.2	1.4	2.4	1.7	2.3	1.5	1.1	.9	1.0	.9	1.8	4.8	7.0	7.1
4.6	4.6	5.7	6.1	7.3	5.2	3.4	2.7	1.9	2.1	2.7	4.0	4.9	4.0	4.7	4.1	1.6	.9	.9	1.1	2.7	2.6	2.0	1.7	1.2	.8	1.8	1.1	1.4	2.1	1.2	1.1	1.3	3.5	3.5	4.7
4.8	6.0	5.5	5.7	6.4	6.4	6.2	5.5	4.4	4.8	5.2	5.8	7.1	7.6	6.4	6.3	4.6	4.0	3.6	3.3	5.6	4.9	3.8	3.8	2.9	2.6	3.1	4.0	3.4	3.4	3.5	3.7	3.2	3.7	3.8	4.4
4.6	4.6	4.9	4.1	4.1	4.7	5.7	5.3	5.0	5.6	5.4	6.2	4.9	4.8	4.9	5.1	5.2	5.3	5.3	5.0	5.3	5.3	5.5	4.8	4.9	4.2	4.2	4.3	4.6	4.7	5.0	5.1	4.8	4.3	3.6	4.3
3.8	3.5	3.6	3.8	4.1	3.7	3.9	4.3	4.7	5.1	5.1	4.8	3.9	3.5	3.3	3.5	3.9	4.0	4.9	5.4	5.3	5.4	5.1	5.4	4.9	4.4	4.0	4.1	4.7	4.6	4.7	4.4	4.6	4.8	4.2	3.6
3.8	3.1	3.2	3.2	3.8	4.1	4.0	4.2	4.4	4.0	3.4	3.9	3.2	2.6	1.7	1.8	2.3	2.9	3.5	4.5	5.6	5.3	4.6	4.2	3.9	3.4	3.6	4.5	4.8	4.7	4.5	4.3	3.7	4.0	4.0	3.7
2.6	2.6	2.9	4.0	5.0	5.0	4.7	5.2	4.5	4.0	3.8	4.3	3.2	1.8	1.8	2.1	3.4	4.1	4.8	4.7	5.2	4.4	2.6	2.3	2.3	2.7	3.2	3.7	3.5	2.7	2.3	2.0	1.8	2.2	3.3	2.6
4.2	4.6	5.1	5.4	5.6	5.6	5.8	5.3	4.3	3.7	3.6	3.6	3.2	2.1	2.1	2.3	2.4	2.7	2.9	2.9	2.9	3.2	2.7	2.3	2.3	2.0	2.6	2.5	1.8	2.2	2.3	2.9	3.5	3.4	3.8	3.9

Figure 60. ATOVS MEAN O-B brightness temperature differences (deg C). AUGUST 2006
Channel: HIRS11 (500 - 700 hPa)
NOAA18, using all observations



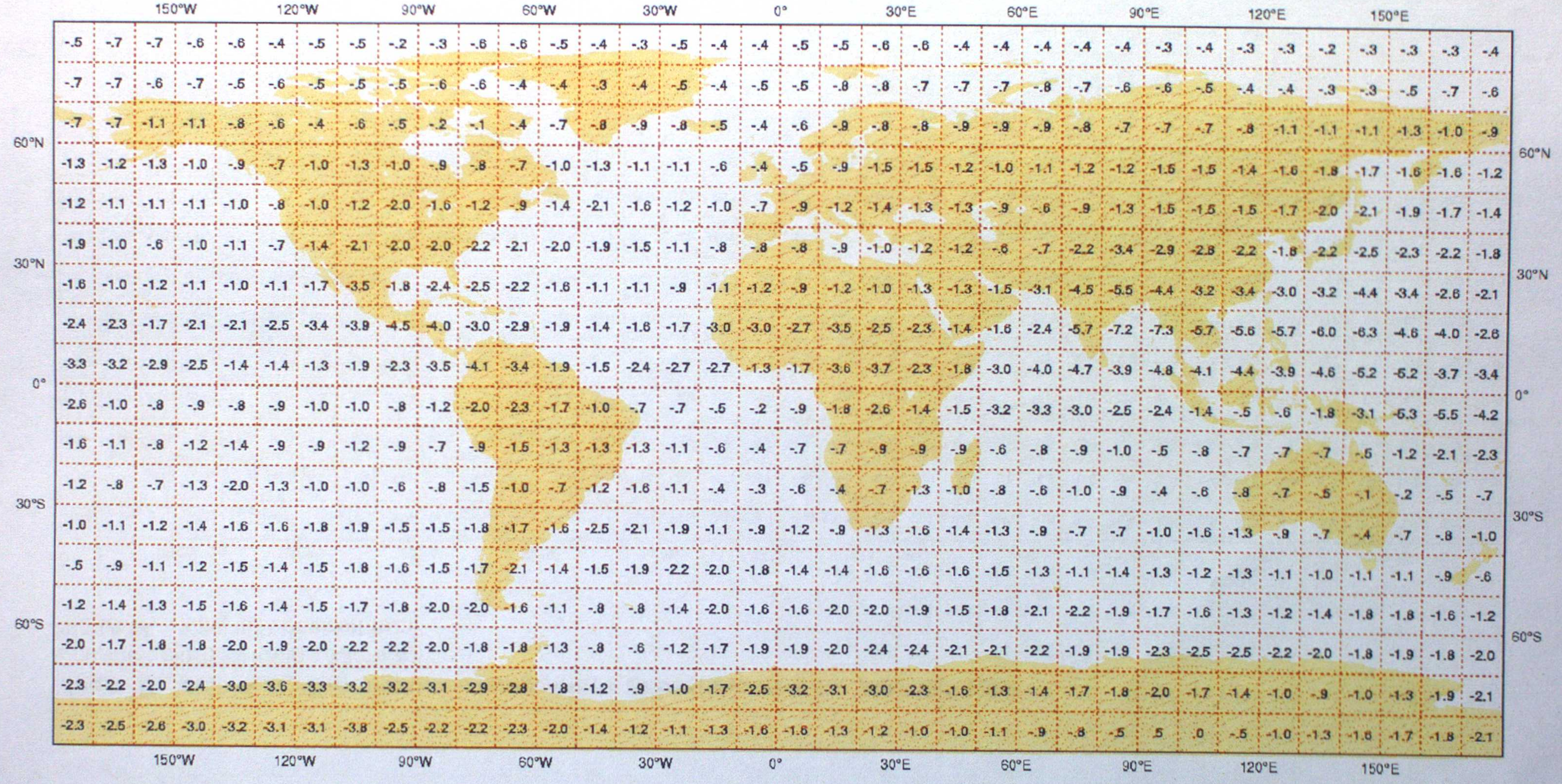
-4.3	-4.8	-4.7	-4.6	-4.5	-4.2	-4.5	-4.3	-4.0	-4.3	-4.8	-5.0	-4.7	-4.5	-4.2	-4.3	-3.8	-3.8	-3.8	-3.9	-3.9	-3.9	-3.8	-4.0	-4.0	-3.7	-3.9	-3.9	-3.9	-3.5	-3.5	-3.4	-3.2	-3.2	-3.6	-3.9
-3.0	-3.3	-3.3	-3.0	-2.5	-2.6	-2.8	-2.9	-2.8	-3.5	-3.3	-3.2	-3.8	-3.9	-3.6	-3.0	-2.4	-2.3	-2.5	-2.7	-2.9	-2.8	-3.0	-3.0	-3.4	-3.4	-3.2	-3.0	-2.8	-2.3	-2.1	-1.8	-2.0	-2.8	-3.1	-2.9
-2.5	-2.8	-4.4	-4.9	-4.0	-3.1	-2.2	-2.7	-2.4	-2.3	-2.5	-3.6	-4.2	-4.5	-4.1	-3.4	-2.3	-2.0	-2.0	-2.4	-2.0	-1.9	-2.0	-2.2	-2.3	-2.6	-2.7	-3.5	-3.1	-3.3	-4.1	-4.0	-4.0	-4.3	-3.6	-3.3
-3.8	-4.1	-4.6	-3.7	-3.4	-3.0	-3.5	-4.4	-3.6	-3.1	-3.1	-3.8	-3.7	-4.0	-3.1	-2.8	-1.6	-1.9	-2.8	-4.1	-4.3	-3.4	-2.6	-2.6	-2.3	-2.5	-3.4	-5.1	-6.0	-4.5	-5.0	-4.7	-3.9	-3.3	-3.5	-3.3
-2.9	-2.5	-2.2	-2.0	-1.3	-1.0	-2.4	-3.6	-5.0	-3.3	-3.2	-2.8	-3.7	-5.4	-3.2	-1.6	-1.0	-1.1	-2.2	-3.9	-2.5	-1.3	-.7	.9	1.2	.3	-1.8	-3.7	-4.3	-4.2	-4.1	-4.2	-3.9	-3.9	-3.8	-3.4
-3.9	-1.7	-1.6	-1.3	-.6	.2	-1.8	-4.2	-3.5	-3.5	-3.8	-4.0	-3.7	-3.1	-1.9	-.8	-.2	-.5	-.8	-.4	-.3	-.4	-1.3	.9	-.4	-3.2	-6.8	-6.6	-6.1	-4.4	-3.6	-3.5	-4.3	-4.8	-4.9	-3.9
-3.7	-1.3	-1.7	-.8	-.4	-.3	-2.0	-7.6	-3.7	-4.6	-4.6	-3.5	-2.5	-.7	-.7	-.6	-1.6	-3.6	-2.2	-2.0	-.8	-1.5	-1.9	-1.3	-5.0	-8.1	-10.4	-8.3	-6.1	-6.5	-5.3	-5.5	-8.2	-6.6	-5.5	-4.6
-4.4	-4.0	-2.7	-3.3	-2.9	-3.9	-5.8	-8.2	-8.5	-8.4	-6.0	-5.3	-2.4	-1.0	-1.9	-2.2	-6.4	-6.9	-6.4	-7.1	-4.2	-3.9	-1.3	-1.1	-2.2	-9.9	-13.7	-15.6	-11.5	-10.9	-11.1	-11.6	-12.0	-8.7	-7.1	-4.8
-6.6	-6.5	-5.2	-4.6	-2.6	-2.2	-2.3	-3.6	-4.1	-7.2	-9.1	-7.9	-3.0	-1.7	-4.5	-4.7	-5.0	-1.2	-3.0	-8.6	-7.6	-3.4	-1.6	-4.6	-7.5	-9.7	-7.6	-10.7	-9.2	-9.7	-7.9	-9.7	-10.5	-9.9	-6.8	-7.2
-3.9	-1.0	-.3	-.5	-.4	-.4	-.6	-.5	-.3	-.9	-3.8	-5.2	-3.2	-1.6	-.4	-.5	-.2	.3	-.8	-3.1	-5.8	-2.0	-2.2	-5.7	-6.3	-5.6	-5.2	-5.0	-1.7	-.4	-.9	-3.6	-6.5	-10.9	-11.6	-8.4
-2.2	-1.5	-.5	-.8	-1.4	-.4	-.3	-.6	-.4	-.6	-1.3	-1.5	-2.3	-2.0	-1.2	-.7	-.3	-.1	-.3	-.2	-.9	-.7	-.5	-.1	-.6	-.4	-.9	-.2	-.6	-.2	-.2	-.8	-.7	-2.3	-4.4	-4.3
-2.6	-2.1	-2.6	-3.4	-5.4	-2.7	-1.3	-1.1	-.6	-.9	-1.5	-.7	-1.5	-2.3	-2.8	-1.7	.0	.1	-.3	.4	-.4	-.8	-.7	-.5	-.4	-.6	-.9	.0	-.1	-.4	-.3	.1	.0	-.7	-.9	-1.9
-2.8	-3.9	-3.8	-4.5	-5.4	-5.3	-5.9	-5.3	-4.1	-4.2	-4.7	-4.7	-5.4	-7.0	-6.0	-5.1	-3.0	-2.3	-2.4	-1.6	-3.3	-3.3	-2.7	-2.5	-1.7	-1.2	-1.4	-2.4	-2.6	-2.4	-1.8	-1.6	-1.4	-2.1	-2.1	-2.6
-3.4	-3.6	-4.6	-4.1	-4.5	-4.9	-5.9	-5.8	-5.3	-5.8	-6.6	-8.2	-5.6	-5.9	-6.6	-7.1	-7.1	-7.0	-5.8	-5.7	-6.0	-5.5	-5.6	-5.0	-5.1	-4.8	-5.8	-5.4	-5.3	-5.6	-5.1	-4.8	-4.3	-3.8	-2.7	-3.2
-4.8	-5.0	-5.5	-5.7	-6.2	-5.1	-5.4	-6.3	-6.6	-6.5	-6.9	-6.2	-5.3	-5.1	-5.7	-7.2	-8.9	-7.4	-8.0	-9.2	-9.1	-8.3	-7.5	-7.8	-8.1	-7.9	-7.3	-6.9	-7.5	-6.4	-6.2	-5.9	-6.5	-6.3	-5.5	-4.5
-7.4	-6.9	-6.7	-6.3	-7.5	-7.1	-7.1	-7.5	-7.5	-6.5	-5.8	-5.5	-4.6	-4.5	-4.0	-5.6	-7.0	-8.2	-8.8	-9.4	-10.5	-9.5	-8.0	-7.3	-7.2	-6.8	-7.2	-8.8	-9.6	-9.1	-8.5	-7.9	-6.3	-6.7	-7.2	-7.3
-7.4	-7.5	-7.5	-8.4	-9.9	-11.1	-9.8	-9.2	-7.9	-6.3	-6.3	-5.6	-5.1	-3.4	-3.5	-3.6	-6.3	-8.1	-10.3	-10.1	-9.1	-6.2	-4.7	-3.3	-3.2	-4.3	-5.5	-5.7	-6.8	-4.9	-3.7	-2.6	-3.1	-3.7	-6.3	-7.0
-7.9	-8.6	-9.1	-8.3	-7.3	-7.1	-6.9	-7.9	-4.3	-3.3	-4.8	-6.0	-4.8	-3.0	-2.5	-2.9	-3.8	-4.6	-4.2	-3.8	-3.5	-4.1	-5.2	-5.0	-4.3	-3.8	-2.7	-.9	-2.7	-3.3	-3.9	-4.3	-5.0	-4.3	-6.3	-7.5

Figure 61. ATOVS SD O-B brightness temperature differences (deg C). AUGUST 2006
Channel: HIRS11 (500 - 700 hPa)
NOAA18, using all observations



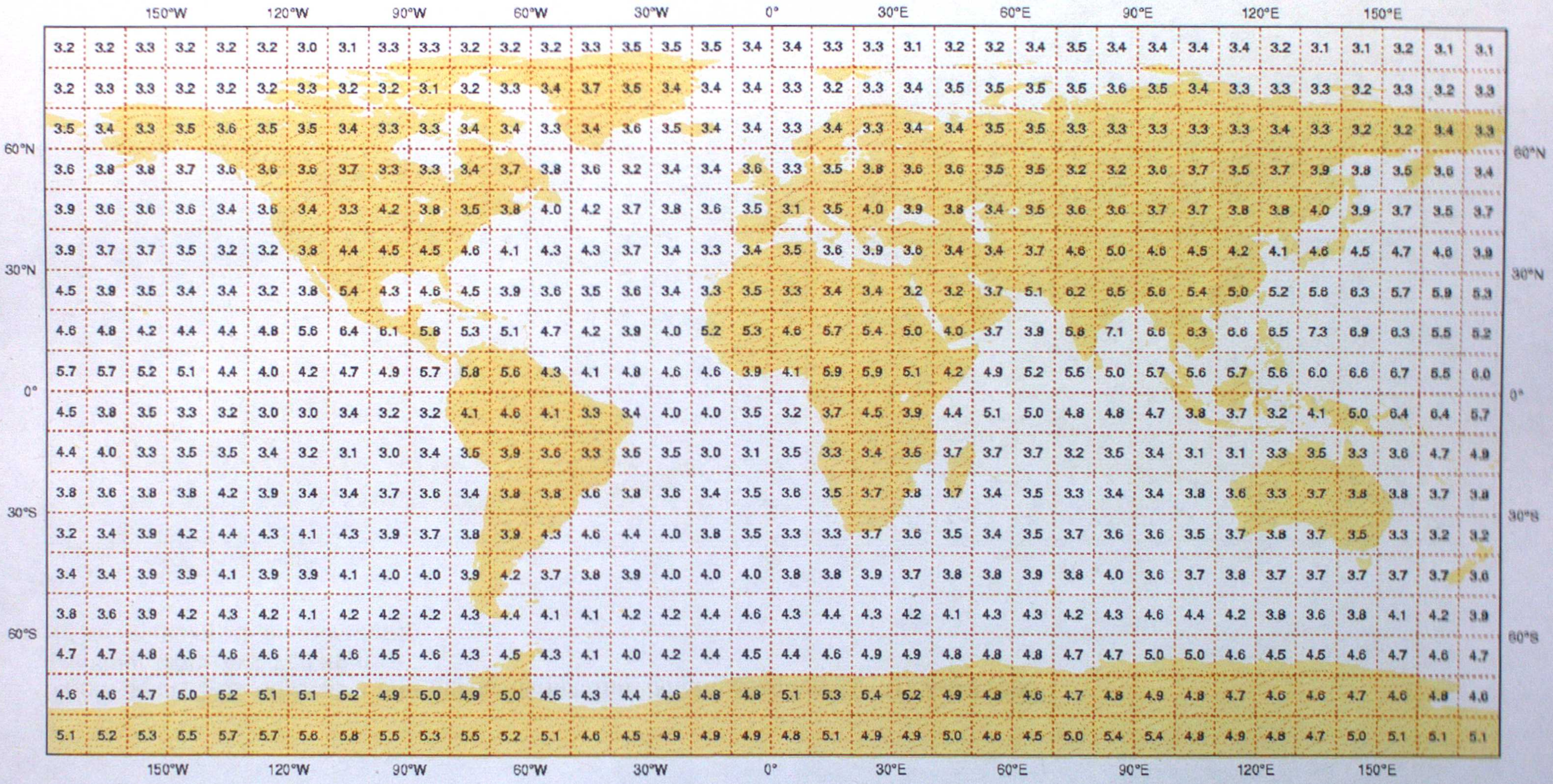
5.9	6.1	6.4	6.4	6.3	6.0	5.7	5.7	5.9	6.1	6.4	6.3	6.3	6.4	6.8	6.5	6.3	6.1	6.2	5.9	5.8	5.7	5.8	6.0	6.4	6.4	6.4	6.5	6.3	6.2	6.1	5.9	5.7	5.6	5.8	5.8
5.8	6.0	6.0	5.8	5.8	5.7	5.9	5.8	5.8	5.9	6.0	6.3	6.6	6.6	6.4	6.1	5.7	5.6	5.4	5.4	5.5	5.9	6.2	6.3	6.7	6.5	6.6	6.3	6.0	5.8	5.8	5.7	5.5	5.9	5.9	5.8
5.9	6.0	6.9	7.5	7.6	6.9	6.6	7.0	6.8	6.7	6.7	6.9	6.9	7.0	7.1	6.5	6.4	5.9	5.8	6.3	5.6	5.6	6.1	6.2	6.2	6.0	6.1	7.0	6.6	6.8	7.4	7.1	7.0	6.8	6.4	6.2
7.1	7.5	8.0	7.6	7.1	7.0	7.8	9.2	7.8	7.7	7.0	8.4	8.0	8.0	6.7	6.8	5.8	6.6	7.1	8.2	8.5	8.0	7.4	7.1	6.7	6.3	7.3	8.8	9.4	8.5	9.3	9.1	8.3	6.7	6.8	6.6
7.2	6.3	6.1	5.8	5.1	5.4	6.8	7.9	11.0	8.7	7.6	7.8	8.5	10.3	7.7	5.9	5.4	5.6	6.4	8.5	7.5	6.1	7.2	5.1	4.8	5.9	7.2	7.8	7.7	8.1	8.5	8.2	7.7	7.9	7.6	7.8
8.9	6.8	6.7	5.4	4.2	3.8	7.3	9.3	10.0	9.7	10.0	8.5	9.3	8.9	7.0	4.5	3.8	4.6	5.6	4.8	4.2	4.4	4.9	5.0	5.9	9.1	11.0	10.3	10.2	9.0	8.4	9.1	9.5	10.3	10.6	8.5
9.6	6.9	6.7	5.2	5.1	3.9	6.7	12.5	9.5	10.5	9.5	7.8	7.3	4.7	4.4	4.0	5.1	5.8	5.1	4.5	3.9	4.0	4.6	6.1	9.8	13.1	14.7	12.6	11.4	10.8	11.4	12.4	14.5	12.5	12.0	11.3
10.1	10.5	8.3	9.5	9.5	10.4	12.3	14.6	13.9	13.5	11.8	11.7	9.7	7.1	7.1	7.8	11.8	12.5	10.6	12.7	11.3	11.2	8.0	5.6	6.4	12.5	16.7	15.7	14.2	15.2	15.1	16.8	15.8	14.2	12.0	11.2
12.9	12.6	11.8	11.6	9.1	8.5	8.8	10.1	10.6	13.5	14.4	13.1	8.6	8.0	10.6	10.2	10.1	7.1	8.7	13.5	13.3	11.4	6.8	10.8	12.6	13.0	11.1	13.3	13.2	12.9	12.9	14.2	15.1	15.4	12.2	13.7
9.6	6.7	4.1	3.5	3.4	3.1	3.3	3.5	3.4	4.3	8.9	10.6	7.8	5.0	4.3	5.2	4.9	4.0	4.3	7.4	10.6	7.2	7.4	11.6	12.1	11.1	10.4	10.6	6.4	5.6	5.3	8.2	11.2	15.2	15.3	13.6
7.7	7.3	5.3	5.3	5.8	4.0	3.2	3.2	3.2	3.6	5.4	7.6	6.3	4.5	4.0	3.7	3.2	3.1	3.5	3.8	4.6	3.8	4.2	4.1	5.3	4.0	4.6	3.9	3.4	3.3	3.5	3.7	3.9	6.6	10.0	9.8
6.5	6.5	7.5	8.6	10.2	7.6	6.1	5.7	5.1	5.0	4.9	7.0	7.6	6.6	6.9	6.1	4.1	3.6	3.7	3.8	5.1	5.3	4.6	4.1	3.7	3.3	4.2	3.8	4.2	4.4	3.7	3.9	4.5	5.6	5.6	6.2
7.4	8.0	8.5	9.1	10.3	10.0	9.8	10.4	8.7	8.7	9.1	9.8	11.0	11.9	11.1	9.9	8.1	7.1	6.9	6.3	8.5	7.5	6.5	6.6	6.1	6.0	6.0	6.9	6.6	6.9	7.4	6.4	6.0	7.0	6.6	6.7
8.1	7.8	9.4	8.1	9.0	8.9	9.9	9.7	9.1	9.7	10.1	11.9	9.0	9.5	10.2	10.6	10.4	10.6	9.6	9.6	10.0	9.0	9.4	8.8	9.2	8.5	8.9	8.7	8.7	9.6	9.3	8.8	8.3	8.4	7.4	8.9
7.3	7.9	8.7	8.5	9.0	8.5	8.4	9.1	9.5	9.6	10.0	10.0	8.6	7.9	8.4	9.0	10.7	9.9	10.1	10.9	10.9	10.3	10.2	10.5	10.1	9.6	9.4	9.9	10.5	9.0	8.8	8.5	9.0	9.5	9.3	7.7
9.6	9.7	9.7	8.3	9.0	9.1	9.5	9.6	9.0	8.9	8.0	8.8	7.1	6.9	6.3	7.2	8.1	8.8	9.6	10.7	12.0	11.4	11.1	11.3	10.3	9.2	9.7	11.8	11.9	11.1	10.7	10.7	9.4	9.6	9.8	9.3
8.3	8.3	8.9	10.5	11.7	11.6	10.7	11.0	10.0	8.9	8.8	10.3	7.9	6.6	6.8	7.7	10.0	11.3	12.6	13.4	14.0	12.4	11.6	11.4	9.3	9.9	11.8	12.2	12.4	11.8	11.7	11.1	10.5	9.7	10.2	8.3
11.2	11.6	12.0	12.5	12.4	12.8	12.6	11.8	10.8	10.1	9.6	9.5	9.7	8.2	8.3	9.2	9.6	10.1	10.3	11.1	10.9	11.7	12.8	12.8	12.1	12.4	13.0	12.9	12.6	11.8	11.4	10.9	11.6	11.4	10.8	11.0

Figure 62. ATOVS MEAN O-B brightness temperature differences (deg C). AUGUST 2006
Channel: HIRS4 (400 hPa)
NOAA18, using all observations



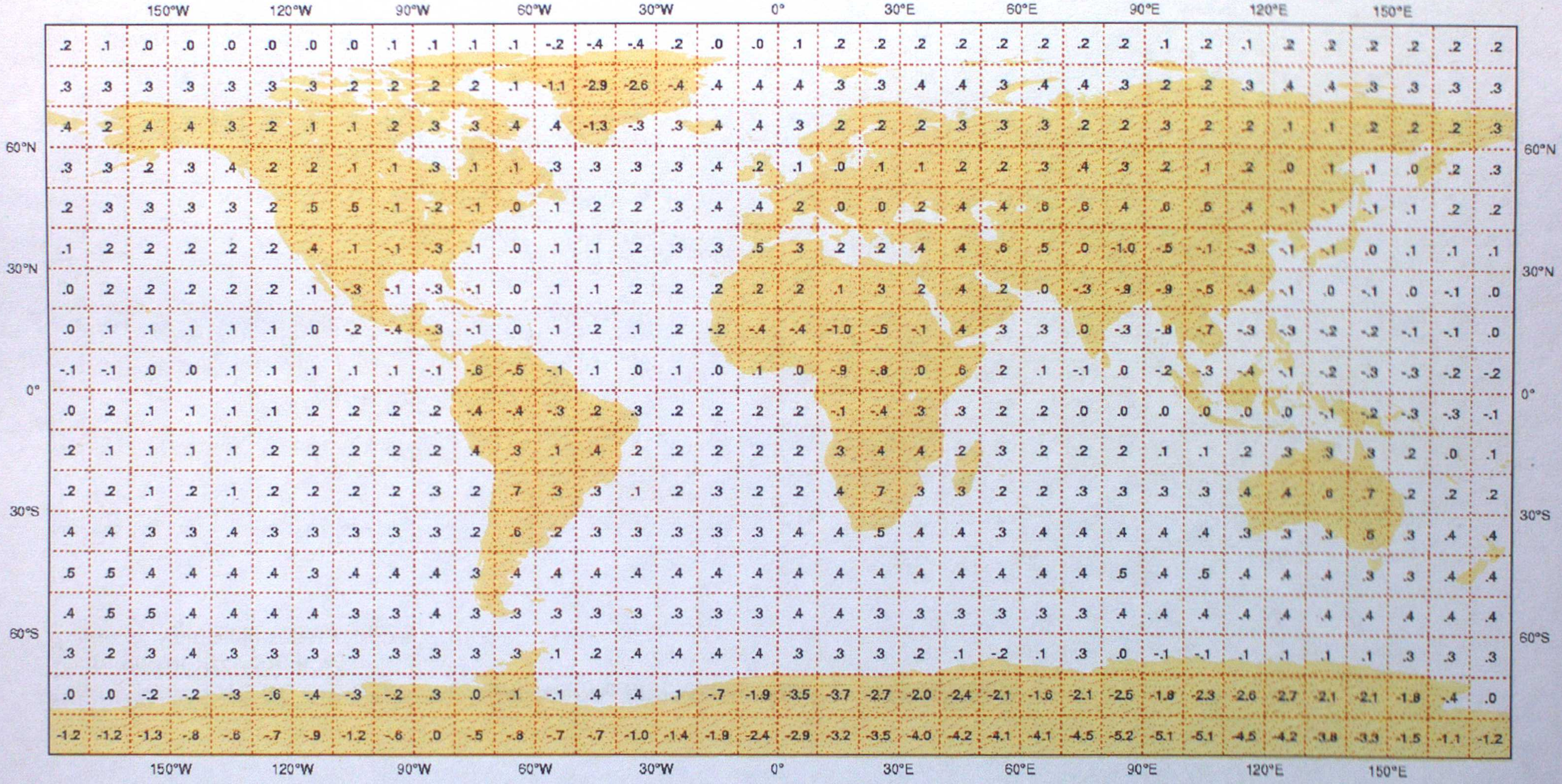
-.5	-.7	-.7	-.6	-.6	-.4	-.5	-.5	-.2	-.3	-.6	-.6	-.5	-.4	-.3	-.5	-.4	-.4	-.5	-.5	-.6	-.6	-.4	-.4	-.4	-.4	-.4	-.3	-.4	-.3	-.3	-.2	-.3	-.3	-.3	-.4
-.7	-.7	-.6	-.7	-.5	-.6	-.5	-.5	-.5	-.6	-.6	-.4	-.4	-.3	-.4	-.5	-.4	-.5	-.5	-.8	-.8	-.7	-.7	-.7	-.8	-.7	-.6	-.6	-.5	-.4	-.4	-.3	-.3	-.5	-.7	-.6
-.7	-.7	-1.1	-1.1	-.8	-.6	-.4	-.6	-.5	-.2	-.1	-.4	-.7	-.8	-.9	-.8	-.5	-.4	-.6	-.9	-.8	-.8	-.9	-.9	-.9	-.8	-.7	-.7	-.7	-.8	-1.1	-1.1	-1.1	-1.3	-1.0	-.9
-1.3	-1.2	-1.3	-1.0	-.9	-.7	-1.0	-1.3	-1.0	-.9	-.8	-.7	-1.0	-1.3	-1.1	-1.1	-.6	-.4	-.5	-.9	-1.5	-1.5	-1.2	-1.0	-1.1	-1.2	-1.2	-1.5	-1.5	-1.4	-1.6	-1.8	-1.7	-1.6	-1.6	-1.2
-1.2	-1.1	-1.1	-1.1	-1.0	-.8	-1.0	-1.2	-2.0	-1.6	-1.2	-.9	-1.4	-2.1	-1.6	-1.2	-1.0	-.7	-.9	-1.2	-1.4	-1.3	-1.3	-.9	-.6	-.9	-1.3	-1.5	-1.5	-1.5	-1.7	-2.0	-2.1	-1.9	-1.7	-1.4
-1.9	-1.0	-.6	-1.0	-1.1	-.7	-1.4	-2.1	-2.0	-2.0	-2.2	-2.1	-2.0	-1.9	-1.5	-1.1	-.8	-.8	-.8	-.9	-1.0	-1.2	-1.2	-.6	-.7	-2.2	-3.4	-2.9	-2.8	-2.2	-1.8	-2.2	-2.5	-2.3	-2.2	-1.8
-1.6	-1.0	-1.2	-1.1	-1.0	-1.1	-1.7	-3.5	-1.8	-2.4	-2.5	-2.2	-1.6	-1.1	-1.1	-.9	-1.1	-1.2	-.9	-1.2	-1.0	-1.3	-1.3	-1.5	-3.1	-4.5	-5.5	-4.4	-3.2	-3.4	-3.0	-3.2	-4.4	-3.4	-2.6	-2.1
-2.4	-2.3	-1.7	-2.1	-2.1	-2.5	-3.4	-3.9	-4.5	-4.0	-3.0	-2.9	-1.9	-1.4	-1.6	-1.7	-3.0	-3.0	-2.7	-3.5	-2.5	-2.3	-1.4	-1.6	-2.4	-5.7	-7.2	-7.3	-5.7	-5.6	-5.7	-6.0	-6.3	-4.6	-4.0	-2.6
-3.3	-3.2	-2.9	-2.5	-1.4	-1.4	-1.3	-1.9	-2.3	-3.5	-4.1	-3.4	-1.9	-1.5	-2.4	-2.7	-2.7	-1.3	-1.7	-3.6	-3.7	-2.3	-1.8	-3.0	-4.0	-4.7	-3.9	-4.8	-4.1	-4.4	-3.9	-4.6	-5.2	-5.2	-3.7	-3.4
-2.6	-1.0	-.8	-.9	-.8	-.9	-1.0	-1.0	-.8	-1.2	-2.0	-2.3	-1.7	-1.0	-.7	-.7	-.5	-.2	-.9	-1.8	-2.6	-1.4	-1.5	-3.2	-3.3	-3.0	-2.5	-2.4	-1.4	-.5	-.6	-1.8	-3.1	-5.3	-5.5	-4.2
-1.6	-1.1	-.8	-1.2	-1.4	-.9	-.9	-1.2	-.9	-.7	-.9	-1.5	-1.3	-1.3	-1.3	-1.1	-.6	-.4	-.7	-.7	-.9	-.9	-.9	-.6	-.8	-.9	-1.0	-.5	-.8	-.7	-.7	-.7	-.5	-1.2	-2.1	-2.3
-1.2	-.8	-.7	-1.3	-2.0	-1.3	-1.0	-1.0	-.6	-.8	-1.5	-1.0	-.7	-1.2	-1.6	-1.1	-.4	-.3	-.6	-.4	-.7	-1.3	-1.0	-.8	-.6	-1.0	-.9	-.4	-.6	-.8	-.7	-.5	-.1	-.2	-.5	-.7
-1.0	-1.1	-1.2	-1.4	-1.6	-1.6	-1.8	-1.9	-1.5	-1.5	-1.8	-1.7	-1.6	-2.5	-2.1	-1.9	-1.1	-.9	-1.2	-.9	-1.3	-1.6	-1.4	-1.3	-.9	-.7	-.7	-1.0	-1.6	-1.3	-.9	-.7	-.4	-.7	-.8	-1.0
-.5	-.9	-1.1	-1.2	-1.5	-1.4	-1.5	-1.8	-1.6	-1.5	-1.7	-2.1	-1.4	-1.5	-1.9	-2.2	-2.0	-1.8	-1.4	-1.4	-1.6	-1.6	-1.6	-1.5	-1.3	-1.1	-1.4	-1.3	-1.2	-1.3	-1.1	-1.0	-1.1	-1.1	-.9	-.6
-1.2	-1.4	-1.3	-1.5	-1.6	-1.4	-1.5	-1.7	-1.8	-2.0	-2.0	-1.6	-1.1	-.8	-.8	-1.4	-2.0	-1.6	-1.6	-2.0	-2.0	-1.9	-1.5	-1.8	-2.1	-2.2	-1.9	-1.7	-1.6	-1.3	-1.2	-1.4	-1.8	-1.8	-1.6	-1.2
-2.0	-1.7	-1.8	-1.8	-2.0	-1.9	-2.0	-2.2	-2.2	-2.0	-1.8	-1.8	-1.3	-.8	-.6	-1.2	-1.7	-1.9	-1.9	-2.0	-2.4	-2.4	-2.1	-2.1	-2.2	-1.9	-1.9	-2.3	-2.5	-2.5	-2.2	-2.0	-1.8	-1.9	-1.8	-2.0
-2.3	-2.2	-2.0	-2.4	-3.0	-3.6	-3.3	-3.2	-3.2	-3.1	-2.9	-2.8	-1.8	-1.2	-.9	-1.0	-1.7	-2.5	-3.2	-3.1	-3.0	-2.3	-1.6	-1.3	-1.4	-1.7	-1.8	-2.0	-1.7	-1.4	-1.0	-.9	-1.0	-1.3	-1.9	-2.1
-2.3	-2.5	-2.6	-3.0	-3.2	-3.1	-3.1	-3.8	-2.5	-2.2	-2.2	-2.3	-2.0	-1.4	-1.2	-1.1	-1.3	-1.6	-1.6	-1.3	-1.2	-1.0	-1.0	-1.1	-.9	-.8	-.5	.5	.0	-.5	-1.0	-1.3	-1.6	-1.7	-1.8	-2.1

Figure 63. ATOVS SD O-B brightness temperature differences (deg C). AUGUST 2006
Channel: HIRS4 (400 hPa)
NOAA18, using all observations



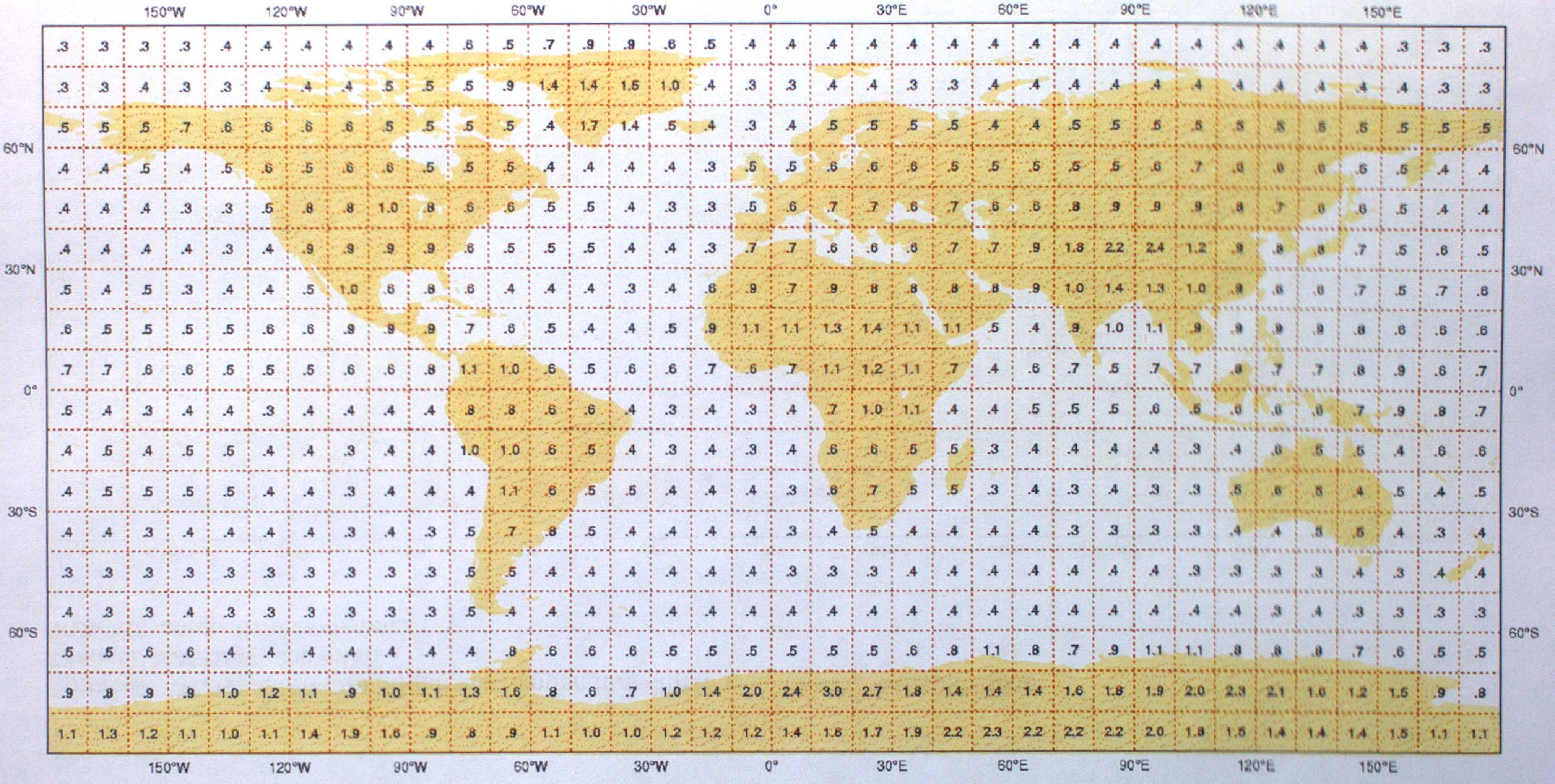
3.2	3.2	3.3	3.2	3.2	3.2	3.0	3.1	3.3	3.3	3.2	3.2	3.2	3.3	3.5	3.5	3.5	3.4	3.4	3.3	3.3	3.1	3.2	3.2	3.4	3.5	3.4	3.4	3.4	3.4	3.2	3.1	3.1	3.2	3.1	3.1
3.2	3.3	3.3	3.2	3.2	3.2	3.3	3.2	3.2	3.1	3.2	3.3	3.4	3.7	3.5	3.4	3.4	3.4	3.3	3.2	3.3	3.4	3.5	3.5	3.5	3.5	3.6	3.5	3.4	3.3	3.3	3.3	3.2	3.3	3.2	3.3
3.5	3.4	3.3	3.5	3.6	3.5	3.5	3.4	3.3	3.3	3.4	3.4	3.3	3.4	3.6	3.5	3.4	3.4	3.3	3.4	3.3	3.4	3.4	3.5	3.5	3.3	3.3	3.3	3.3	3.3	3.4	3.3	3.2	3.2	3.4	3.3
3.6	3.8	3.8	3.7	3.6	3.6	3.6	3.7	3.3	3.3	3.4	3.7	3.8	3.6	3.2	3.4	3.4	3.6	3.3	3.5	3.8	3.6	3.6	3.5	3.5	3.2	3.2	3.6	3.7	3.5	3.7	3.9	3.8	3.5	3.6	3.4
3.9	3.6	3.6	3.6	3.4	3.6	3.4	3.3	4.2	3.8	3.5	3.8	4.0	4.2	3.7	3.8	3.6	3.5	3.1	3.5	4.0	3.9	3.8	3.4	3.5	3.6	3.6	3.7	3.7	3.8	3.8	4.0	3.9	3.7	3.5	3.7
3.9	3.7	3.7	3.5	3.2	3.2	3.8	4.4	4.5	4.5	4.6	4.1	4.3	4.3	3.7	3.4	3.3	3.4	3.5	3.6	3.9	3.6	3.4	3.4	3.7	4.6	5.0	4.6	4.5	4.2	4.1	4.6	4.5	4.7	4.6	3.9
4.5	3.9	3.5	3.4	3.4	3.2	3.8	5.4	4.3	4.6	4.5	3.9	3.6	3.5	3.6	3.4	3.3	3.5	3.3	3.4	3.4	3.2	3.2	3.7	5.1	6.2	6.5	5.6	5.4	5.0	5.2	5.8	6.3	5.7	5.9	5.3
4.6	4.8	4.2	4.4	4.4	4.8	5.6	6.4	6.1	5.8	5.3	5.1	4.7	4.2	3.9	4.0	5.2	5.3	4.6	5.7	5.4	5.0	4.0	3.7	3.9	5.8	7.1	6.6	6.3	6.6	6.5	7.3	6.9	6.3	5.5	5.2
5.7	5.7	5.2	5.1	4.4	4.0	4.2	4.7	4.9	5.7	5.8	5.6	4.3	4.1	4.8	4.6	4.6	3.9	4.1	5.9	5.9	5.1	4.2	4.9	5.2	5.5	5.0	5.7	5.6	5.7	5.6	6.0	6.6	6.7	6.5	6.0
4.5	3.8	3.5	3.3	3.2	3.0	3.0	3.4	3.2	3.2	4.1	4.6	4.1	3.3	3.4	4.0	4.0	3.5	3.2	3.7	4.5	3.9	4.4	5.1	5.0	4.8	4.8	4.7	3.8	3.7	3.2	4.1	5.0	6.4	6.4	5.7
4.4	4.0	3.3	3.5	3.5	3.4	3.2	3.1	3.0	3.4	3.5	3.9	3.6	3.3	3.5	3.5	3.0	3.1	3.5	3.3	3.4	3.5	3.7	3.7	3.7	3.2	3.5	3.4	3.1	3.1	3.3	3.5	3.3	3.6	4.7	4.9
3.8	3.6	3.8	3.8	4.2	3.9	3.4	3.4	3.7	3.6	3.4	3.8	3.8	3.6	3.8	3.6	3.4	3.5	3.6	3.5	3.7	3.8	3.7	3.4	3.5	3.3	3.4	3.4	3.8	3.6	3.3	3.7	3.8	3.8	3.7	3.8
3.2	3.4	3.9	4.2	4.4	4.3	4.1	4.3	3.9	3.7	3.8	3.9	4.3	4.6	4.4	4.0	3.8	3.5	3.3	3.3	3.7	3.6	3.5	3.4	3.5	3.7	3.6	3.6	3.5	3.7	3.8	3.7	3.5	3.3	3.2	3.2
3.4	3.4	3.9	3.9	4.1	3.9	3.9	4.1	4.0	4.0	3.9	4.2	3.7	3.8	3.9	4.0	4.0	4.0	3.8	3.8	3.9	3.7	3.8	3.8	3.9	3.8	4.0	3.6	3.7	3.8	3.7	3.7	3.7	3.7	3.7	3.6
3.8	3.6	3.9	4.2	4.3	4.2	4.1	4.2	4.2	4.2	4.3	4.4	4.1	4.1	4.2	4.2	4.4	4.6	4.3	4.4	4.3	4.2	4.1	4.3	4.3	4.2	4.3	4.6	4.4	4.2	3.8	3.6	3.8	4.1	4.2	3.9
4.7	4.7	4.8	4.6	4.6	4.6	4.4	4.6	4.5	4.6	4.3	4.5	4.3	4.1	4.0	4.2	4.4	4.5	4.4	4.6	4.9	4.9	4.8	4.8	4.8	4.7	4.7	5.0	5.0	4.6	4.5	4.5	4.6	4.7	4.6	4.7
4.6	4.6	4.7	5.0	5.2	5.1	5.1	5.2	4.9	5.0	4.9	5.0	4.5	4.3	4.4	4.6	4.8	4.8	5.1	5.3	5.4	5.2	4.9	4.8	4.6	4.7	4.8	4.9	4.8	4.7	4.6	4.6	4.7	4.6	4.8	4.6
5.1	5.2	5.3	5.5	5.7	5.7	5.6	5.8	5.5	5.3	5.5	5.2	5.1	4.6	4.5	4.9	4.9	4.9	4.8	5.1	4.9	4.9	5.0	4.6	4.5	5.0	5.4	5.4	4.8	4.9	4.8	4.7	5.0	5.1	5.1	5.1

Figure 64. ATOVS MEAN O-B brightness temperature differences (deg C). AUGUST 2006
Channel: AMSUA-5 (700 hPa)
NOAA18, using all observations



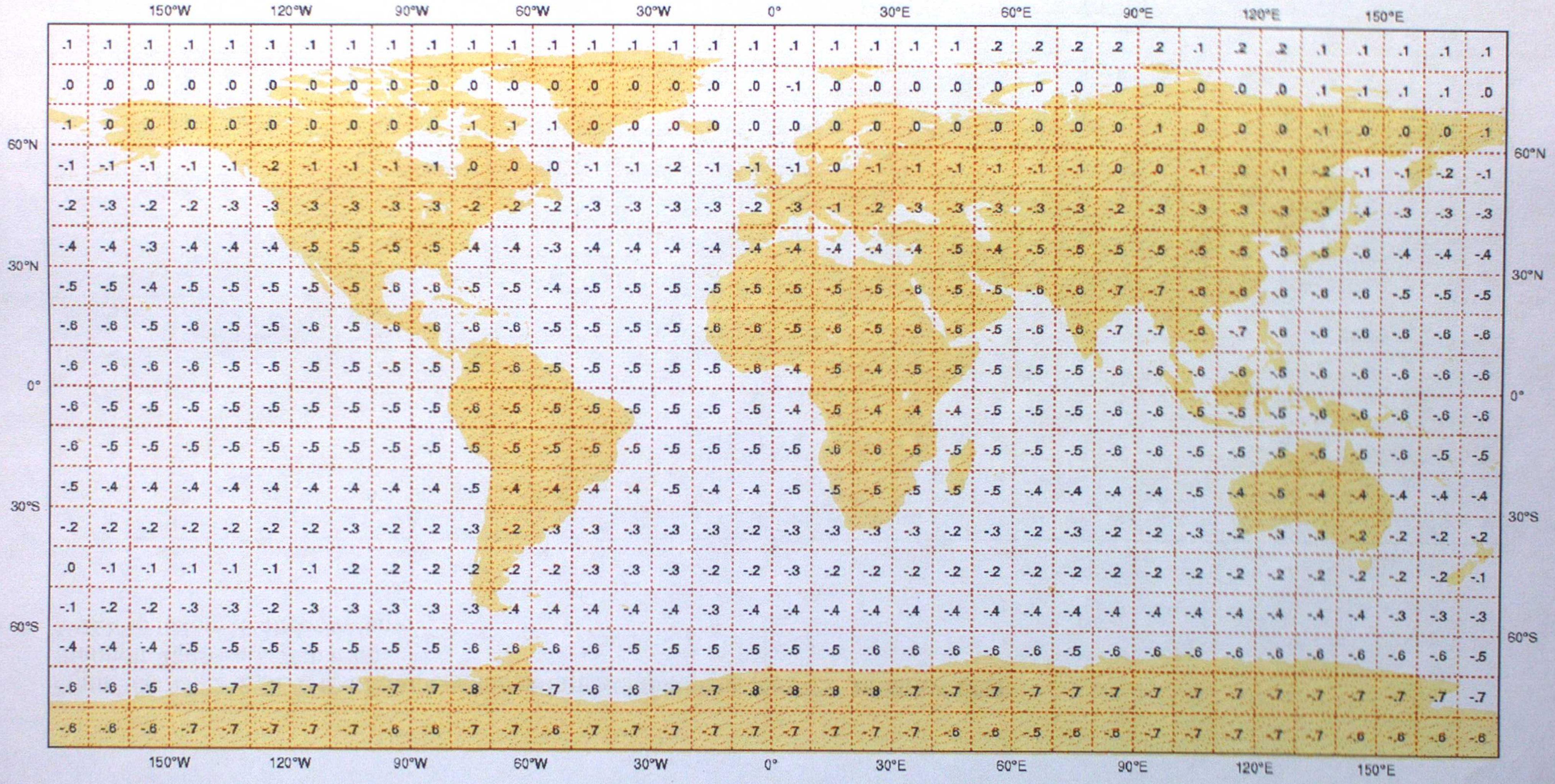
.2	.1	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1	-.2	-.4	-.4	.2	.0	.0	.1	.2	.2	.2	.2	.2	.2	.2	.2	.1	.2	.1	.2	.2	.2	.2	.2	.2
.3	.3	.3	.3	.3	.3	.3	.2	.2	.2	.2	.1	-1.1	-2.9	-2.6	-.4	.4	.4	.4	.3	.3	.4	.4	.3	.4	.4	.3	.2	.2	.3	.4	.4	.3	.3	.3	.3
.4	.2	.4	.4	.3	.2	.1	.1	.2	.3	.3	.4	.4	-1.3	-.3	.3	.4	.4	.3	.2	.2	.2	.3	.3	.3	.2	.2	.3	.2	.2	.1	.1	.2	.2	.2	.3
.3	.3	.2	.3	.4	.2	.2	.1	.1	.3	.1	.1	.3	.3	.3	.3	.4	.2	.1	.0	.1	.1	.2	.2	.3	.4	.3	.2	.1	.2	.0	.1	.1	.0	.2	.3
.2	.3	.3	.3	.3	.2	.5	.5	-.1	-.2	-.1	.0	.1	.2	.2	.3	.4	.4	.2	.0	.0	.2	.4	.4	.6	.6	.4	.6	.5	.4	-.1	-.1	-.1	.1	.2	.2
.1	.2	.2	.2	.2	.2	.4	.1	-.1	-.3	-.1	.0	.1	.1	.2	.3	.3	.5	.3	.2	.2	.4	.4	.6	.5	.0	-1.0	-.5	-.1	-.3	-.1	-.1	.0	.1	.1	.1
.0	.2	.2	.2	.2	.2	.1	-.3	-.1	-.3	-.1	.0	.1	.1	.2	.2	.2	.2	.2	.1	.3	.2	.4	.2	.0	-.3	-.9	-.9	-.5	-.4	-.1	.0	-.1	.0	-.1	.0
.0	.1	.1	.1	.1	.1	.0	-.2	-.4	-.3	-.1	.0	.1	.2	.1	.2	-.2	-.4	-.4	-1.0	-.5	-.1	.4	.3	.3	.0	-.3	-.8	-.7	-.3	-.3	-.2	-.2	-.1	-.1	.0
-.1	-.1	.0	.0	.1	.1	.1	.1	.1	-.1	-.6	-.5	-.1	.1	.0	.1	.0	.1	.0	-.9	-.8	.0	.6	.2	.1	-.1	.0	-.2	-.3	-.4	-.1	-.2	-.3	-.3	-.2	-.2
.0	.2	.1	.1	.1	.1	.2	.2	.2	.2	-.4	-.4	-.3	.2	.3	.2	.2	.2	.2	-.1	-.4	.3	.3	.2	.2	.0	.0	.0	.0	.0	.0	-.1	-.2	-.3	-.3	-.1
.2	.1	.1	.1	.1	.2	.2	.2	.2	.2	.4	.3	.1	.4	.2	.2	.2	.2	.2	.3	.4	.4	.2	.3	.2	.2	.2	.1	.1	.2	.3	.3	.3	.2	.0	.1
.2	.2	.1	.2	.1	.2	.2	.2	.2	.3	.2	.7	.3	.3	.1	.2	.3	.2	.2	.4	.7	.3	.3	.2	.2	.3	.3	.3	.3	.4	.4	.6	.7	.2	.2	.2
.4	.4	.3	.3	.4	.3	.3	.3	.3	.3	.2	.6	.2	.3	.3	.3	.3	.3	.4	.4	.5	.4	.4	.3	.4	.4	.4	.4	.4	.3	.3	.3	.5	.3	.4	.4
.5	.5	.4	.4	.4	.4	.3	.4	.4	.4	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.5	.4	.5	.4	.4	.4	.3	.3	.4	.4
.4	.5	.5	.4	.4	.4	.4	.3	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.3	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4
.3	.2	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.1	.2	.4	.4	.4	.4	.3	.3	.3	.2	.1	-.2	.1	.3	.0	-.1	-.1	.1	.1	.1	.1	.3	.3	.3
.0	.0	-.2	-.2	-.3	-.6	-.4	-.3	-.2	.3	.0	.1	-.1	.4	.4	.1	-.7	-1.9	-3.5	-3.7	-2.7	-2.0	-2.4	-2.1	-1.6	-2.1	-2.5	-1.8	-2.3	-2.6	-2.7	-2.1	-2.1	-1.8	-.4	.0
-1.2	-1.2	-1.3	-.8	-.6	-.7	-.9	-1.2	-.6	.0	-.5	-.8	-.7	-.7	-1.0	-1.4	-1.9	-2.4	-2.9	-3.2	-3.5	-4.0	-4.2	-4.1	-4.1	-4.5	-5.2	-5.1	-5.1	-4.5	-4.2	-3.8	-3.3	-1.5	-1.1	-1.2

Figure 65. ATOVS SD O-B brightness temperature differences (deg C). AUGUST 2006
Channel: AMSUA-5 (700 hPa)
NOAA18, using all observations



.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.6	.5	.7	.9	.9	.6	.5	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3
.3	.3	.4	.3	.3	.4	.4	.4	.5	.5	.5	.9	1.4	1.4	1.5	1.0	.4	.3	.3	.4	.4	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3
.5	.5	.5	.7	.6	.6	.6	.6	.5	.5	.5	.5	.4	1.7	1.4	.5	.4	.3	.4	.5	.5	.5	.5	.4	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
.4	.4	.5	.4	.5	.6	.5	.6	.6	.5	.5	.5	.4	.4	.4	.4	.3	.5	.5	.6	.6	.6	.5	.5	.5	.5	.5	.6	.7	.6	.6	.6	.5	.5	.4	.4
.4	.4	.4	.3	.3	.5	.8	.8	1.0	.8	.6	.6	.5	.5	.4	.3	.3	.5	.6	.7	.7	.6	.7	.6	.6	.8	.9	.9	.9	.8	.7	.6	.6	.5	.4	.4
.4	.4	.4	.4	.3	.4	.9	.9	.9	.9	.6	.5	.5	.5	.4	.4	.3	.7	.7	.6	.6	.6	.7	.7	.9	1.8	2.2	2.4	1.2	.9	.8	.8	.7	.5	.6	.5
.5	.4	.5	.3	.4	.4	.5	1.0	.6	.8	.6	.4	.4	.4	.3	.4	.6	.9	.7	.9	.8	.8	.8	.8	.9	1.0	1.4	1.3	1.0	.9	.8	.8	.7	.5	.7	.8
.6	.5	.5	.5	.5	.6	.6	.9	.9	.9	.7	.6	.5	.4	.4	.5	.9	1.1	1.1	1.3	1.4	1.1	1.1	.5	.4	.9	1.0	1.1	.9	.9	.9	.9	.8	.6	.6	.6
.7	.7	.6	.6	.5	.5	.5	.6	.6	.8	1.1	1.0	.6	.5	.6	.6	.7	.6	.7	1.1	1.2	1.1	.7	.4	.6	.7	.5	.7	.7	.8	.7	.7	.8	.9	.6	.7
.5	.4	.3	.4	.4	.3	.4	.4	.4	.4	.8	.8	.6	.6	.4	.3	.4	.3	.4	.7	1.0	1.1	.4	.4	.5	.5	.5	.6	.5	.6	.6	.6	.7	.9	.8	.7
.4	.5	.4	.5	.5	.4	.4	.3	.4	.4	1.0	1.0	.6	.5	.4	.3	.4	.3	.4	.6	.6	.5	.5	.3	.4	.4	.4	.4	.3	.4	.6	.5	.5	.4	.6	.6
.4	.5	.5	.5	.5	.4	.4	.3	.4	.4	.4	1.1	.6	.5	.5	.4	.4	.4	.3	.6	.7	.5	.5	.3	.4	.3	.4	.3	.3	.5	.6	.5	.4	.5	.4	.5
.4	.4	.3	.4	.4	.4	.4	.3	.4	.3	.5	.7	.8	.5	.4	.4	.4	.4	.3	.4	.5	.4	.4	.4	.4	.3	.3	.3	.3	.4	.4	.5	.5	.4	.3	.4
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.5	.5	.4	.4	.4	.4	.4	.4	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.4	.3	.4	.4
.4	.3	.3	.4	.3	.3	.3	.3	.3	.3	.5	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.4	.3	.3	.3	.3
.5	.5	.6	.6	.4	.4	.4	.4	.4	.4	.4	.8	.6	.6	.6	.5	.5	.5	.5	.5	.5	.6	.8	1.1	.8	.7	.9	1.1	1.1	.8	.8	.8	.7	.6	.5	.5
.9	.8	.9	.9	1.0	1.2	1.1	.9	1.0	1.1	1.3	1.6	.8	.6	.7	1.0	1.4	2.0	2.4	3.0	2.7	1.8	1.4	1.4	1.4	1.6	1.8	1.9	2.0	2.3	2.1	1.6	1.2	1.5	.9	.8
1.1	1.3	1.2	1.1	1.0	1.1	1.4	1.9	1.6	.9	.8	.9	1.1	1.0	1.0	1.2	1.2	1.2	1.4	1.6	1.7	1.9	2.2	2.3	2.2	2.2	2.2	2.0	1.8	1.5	1.4	1.4	1.4	1.5	1.1	1.1

Figure 66. ATOVS MEAN O-B brightness temperature differences (deg C). AUGUST 2006
Channel: AMSUA-7 (300 hPa)
NOAA18, using all observations



.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.2	.2	.2	.2	.2	.1	.2	.2	.1	.1	.1	.1	.1
.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	-.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1	.0
.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	-.1	.0	.0	.0	.1
-.1	-.1	-.1	-.1	-.1	-.2	-.1	-.1	-.1	-.1	.0	.0	.0	-.1	-.1	-.2	-.1	-.1	-.1	.0	-.1	-.1	-.1	-.1	-.1	-.1	.0	.0	-.1	.0	-.1	-.2	-.1	-.1	-.2	-.1
-.2	-.3	-.2	-.2	-.3	-.3	-.3	-.3	-.3	-.3	-.2	-.2	-.2	-.3	-.3	-.3	-.3	-.2	-.3	-.1	-.2	-.3	-.3	-.3	-.3	-.3	-.2	-.3	-.3	-.3	-.3	-.3	-.4	-.3	-.3	-.3
-.4	-.4	-.3	-.4	-.4	-.4	-.5	-.5	-.5	-.5	-.4	-.4	-.3	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.5	-.4	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.6	-.4	-.4	-.4
-.5	-.5	-.4	-.5	-.5	-.5	-.5	-.5	-.6	-.6	-.5	-.5	-.4	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.6	-.5	-.5	-.6	-.6	-.7	-.7	-.6	-.6	-.6	-.6	-.6	-.5	-.5	-.5
-.6	-.6	-.5	-.6	-.5	-.5	-.6	-.5	-.6	-.6	-.6	-.6	-.5	-.5	-.5	-.5	-.6	-.6	-.5	-.6	-.5	-.6	-.6	-.5	-.6	-.6	-.7	-.7	-.6	-.7	-.6	-.6	-.6	-.6	-.6	-.6
-.6	-.6	-.6	-.6	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.6	-.5	-.5	-.5	-.5	-.5	-.6	-.4	-.5	-.4	-.5	-.5	-.5	-.5	-.5	-.6	-.6	-.6	-.6	-.5	-.6	-.6	-.6	-.6	-.6
-.6	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.6	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.4	-.5	-.4	-.4	-.4	-.5	-.5	-.5	-.6	-.6	-.5	-.5	-.5	-.6	-.6	-.6	-.6	-.6
-.6	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.6	-.6	-.5	-.5	-.5	-.5	-.5	-.6	-.6	-.5	-.5	-.5	-.5	-.5	-.6	-.5	-.5
-.5	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.5	-.4	-.4	-.4	-.4	-.5	-.4	-.4	-.5	-.5	-.5	-.5	-.5	-.5	-.4	-.4	-.4	-.4	-.5	-.4	-.5	-.4	-.4	-.4	-.4	-.4
-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.3	-.2	-.2	-.3	-.2	-.3	-.3	-.3	-.3	-.3	-.2	-.3	-.3	-.3	-.3	-.2	-.3	-.2	-.3	-.2	-.2	-.3	-.2	-.3	-.3	-.2	-.2	-.2	-.2
.0	-.1	-.1	-.1	-.1	-.1	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.3	-.3	-.3	-.2	-.2	-.3	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.1
-.1	-.2	-.2	-.3	-.3	-.2	-.3	-.3	-.3	-.3	-.3	-.4	-.4	-.4	-.4	-.4	-.3	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.3	-.3	-.3
-.4	-.4	-.4	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.6	-.6	-.6	-.6	-.5	-.5	-.5	-.5	-.5	-.5	-.6	-.6	-.6	-.6	-.6	-.5	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.5
-.6	-.6	-.5	-.6	-.7	-.7	-.7	-.7	-.7	-.7	-.8	-.7	-.7	-.6	-.6	-.7	-.7	-.8	-.8	-.8	-.8	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.7
-.6	-.6	-.6	-.7	-.7	-.7	-.7	-.7	-.6	-.6	-.7	-.7	-.6	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.6	-.6	-.5	-.6	-.6	-.7	-.7	-.7	-.7	-.7	-.6	-.6	-.6	-.6

Figure 67. ATOVS SD O-B brightness temperature differences (deg C). AUGUST 2006
Channel: AMSUA-7 (300 hPa)
NOAA18, using all observations

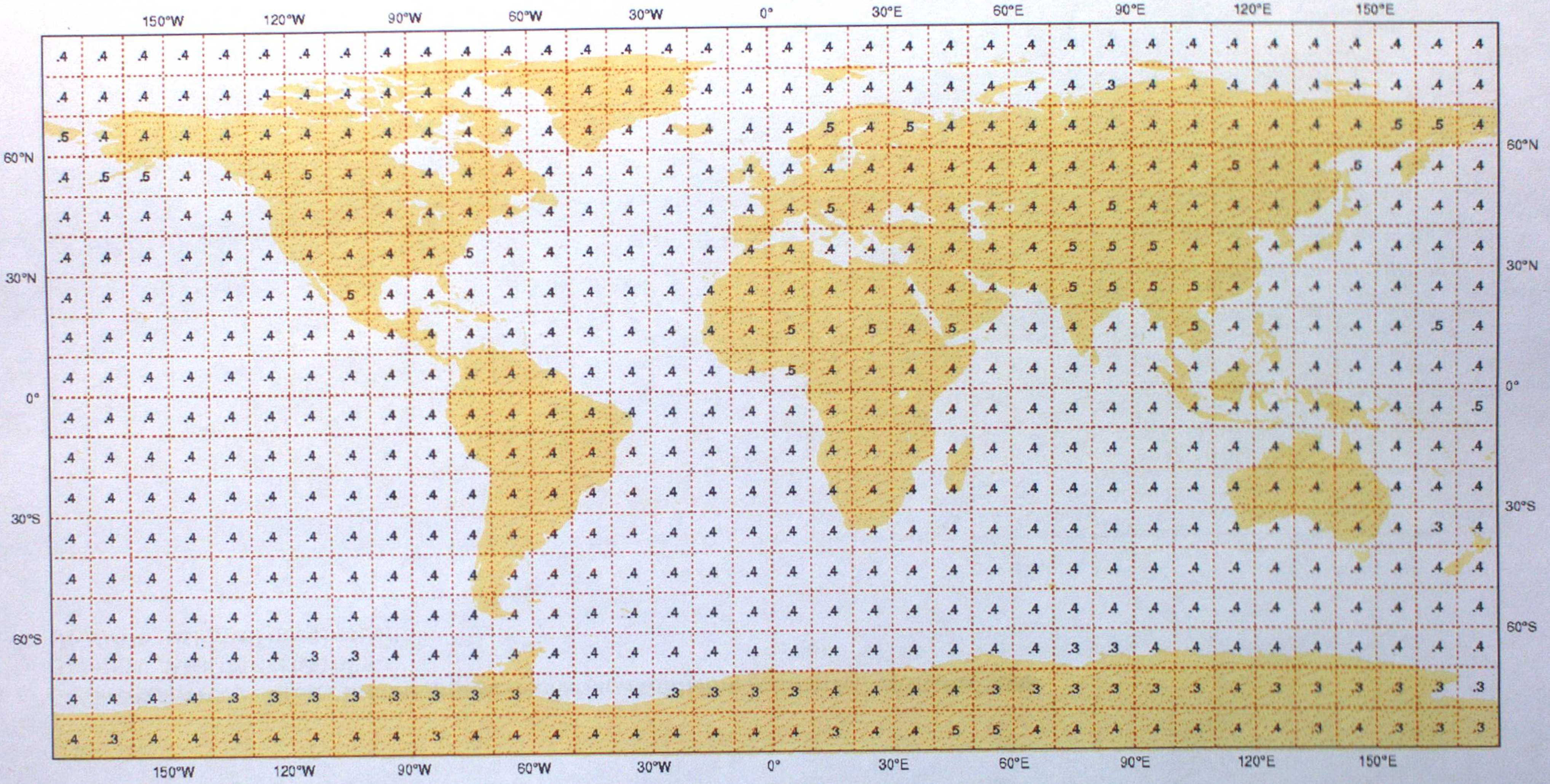
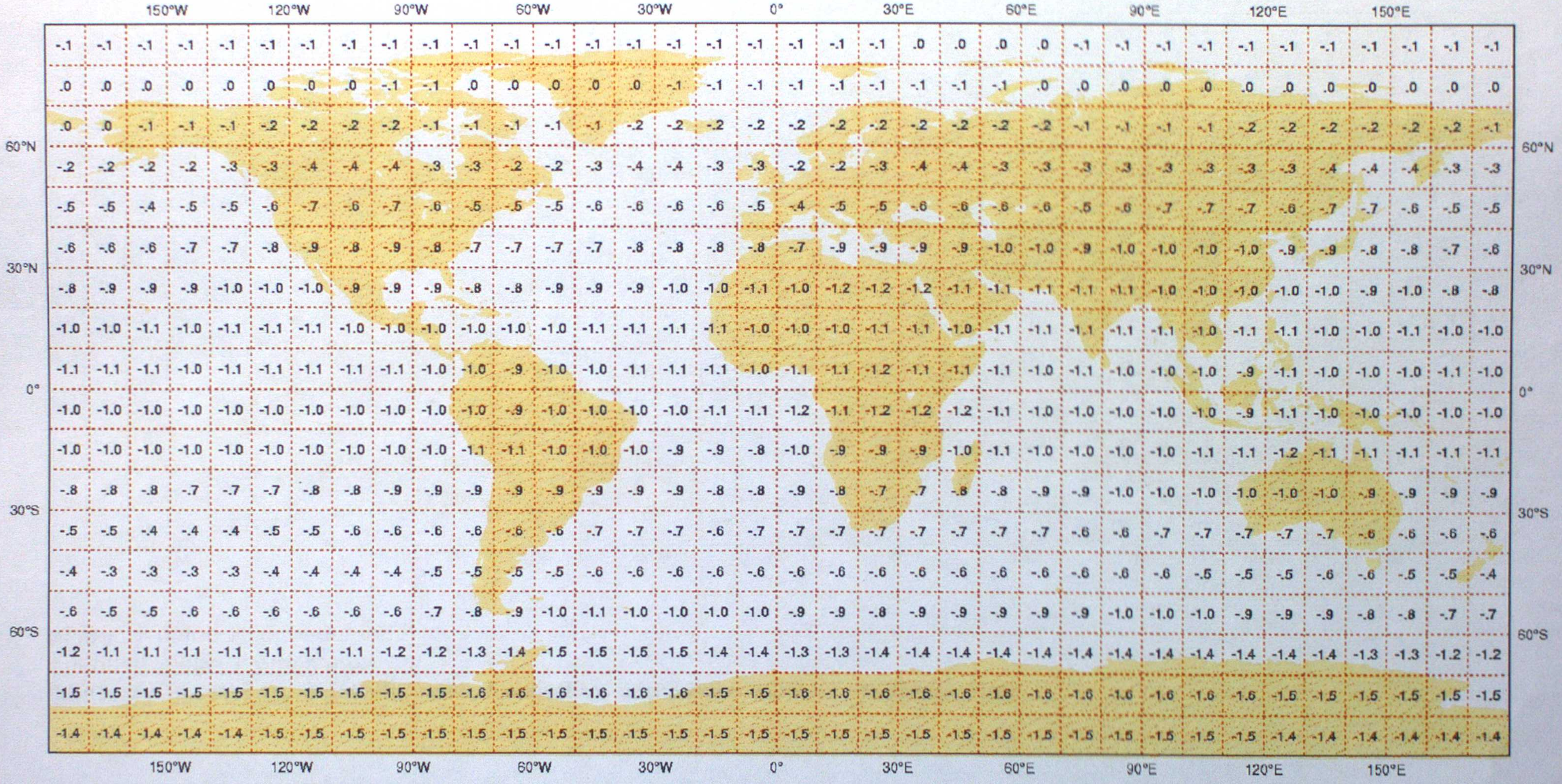
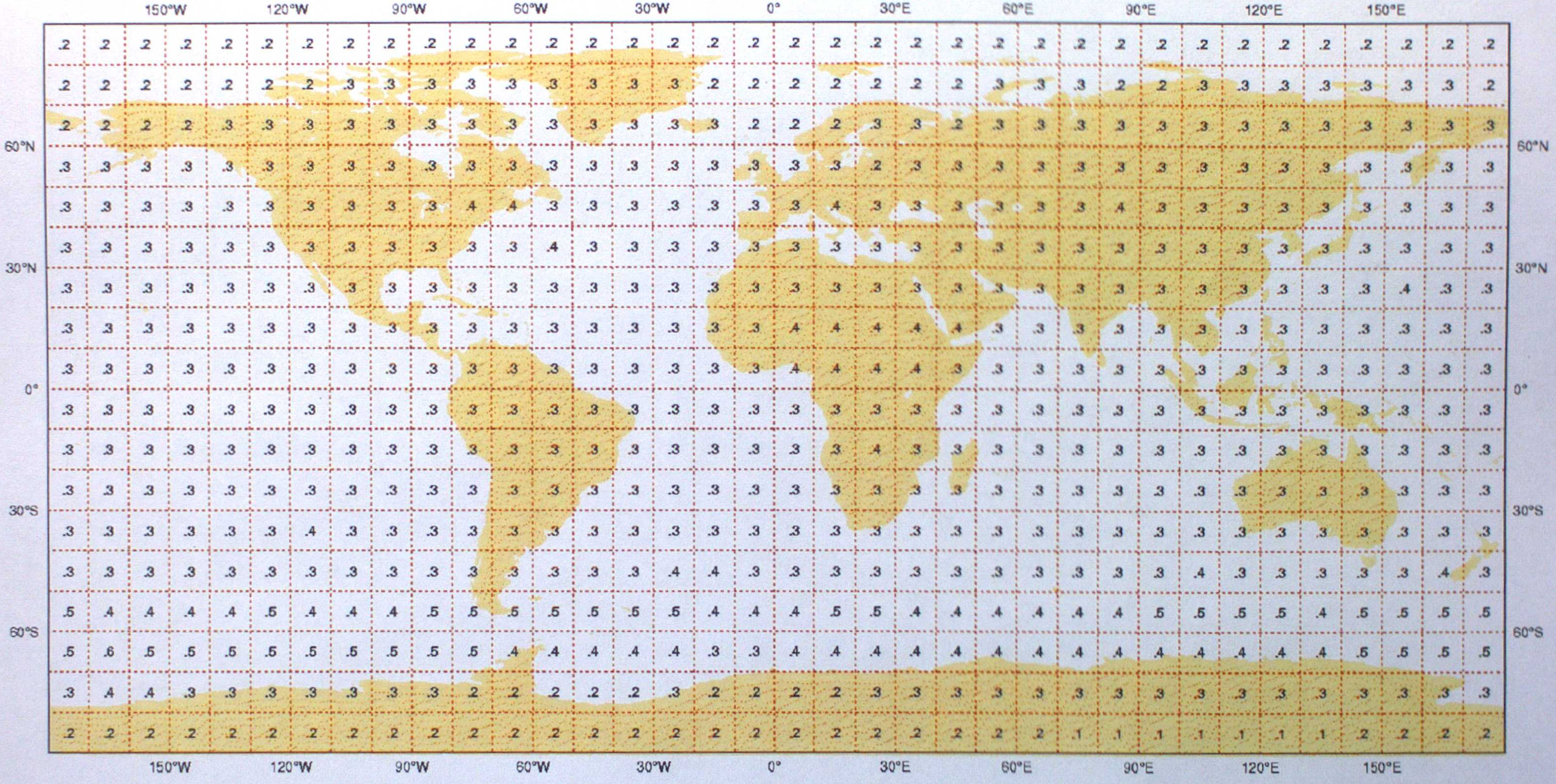

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S

Figure 68. ATOVS MEAN O-B brightness temperature differences (deg C). AUGUST 2006
Channel: AMSUA-9 (100 hPa)
NOAA18, using all observations



-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	.0	.0	.0	.0	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1
.0	.0	.0	.0	.0	.0	.0	.0	-.1	-.1	.0	.0	.0	.0	.0	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
.0	.0	-.1	-.1	-.1	-.2	-.2	-.2	-.2	-.1	-.1	-.1	-.1	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1	-.1	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.1
-.2	-.2	-.2	-.2	-.3	-.3	-.4	-.4	-.4	-.3	-.3	-.2	-.2	-.3	-.4	-.4	-.3	-.3	-.2	-.2	-.3	-.4	-.4	-.3	-.3	-.3	-.3	-.3	-.3	-.3	-.3	-.4	-.4	-.4	-.3	-.3
-.5	-.5	-.4	-.5	-.5	-.6	-.7	-.6	-.7	-.6	-.5	-.5	-.5	-.6	-.6	-.6	-.6	-.5	-.4	-.5	-.5	-.6	-.6	-.6	-.6	-.5	-.6	-.7	-.7	-.7	-.6	-.7	-.7	-.6	-.5	-.5
-.6	-.6	-.6	-.7	-.7	-.8	-.9	-.8	-.9	-.8	-.7	-.7	-.7	-.7	-.8	-.8	-.8	-.8	-.7	-.9	-.9	-.9	-.9	-1.0	-1.0	-.9	-1.0	-1.0	-1.0	-1.0	-.9	-.9	-.8	-.8	-.7	-.6
-.8	-.9	-.9	-.9	-1.0	-1.0	-1.0	-.9	-.9	-.9	-.8	-.8	-.9	-.9	-.9	-1.0	-1.0	-1.1	-1.0	-1.2	-1.2	-1.2	-1.1	-1.1	-1.1	-1.1	-1.1	-1.0	-1.0	-1.0	-1.0	-1.0	-.9	-1.0	-.8	-.8
-1.0	-1.0	-1.1	-1.0	-1.1	-1.1	-1.1	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.1	-1.1	-1.1	-1.1	-1.0	-1.0	-1.0	-1.1	-1.1	-1.0	-1.1	-1.1	-1.1	-1.1	-1.1	-1.0	-1.1	-1.1	-1.0	-1.0	-1.1	-1.0	-1.0
-1.1	-1.1	-1.1	-1.0	-1.1	-1.1	-1.1	-1.1	-1.1	-1.0	-1.0	-.9	-1.0	-1.0	-1.1	-1.1	-1.1	-1.0	-1.1	-1.1	-1.2	-1.1	-1.1	-1.1	-1.0	-1.1	-1.0	-1.0	-1.0	-.9	-1.1	-1.0	-1.0	-1.0	-1.1	-1.0
-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-.9	-1.0	-1.0	-1.0	-1.0	-1.1	-1.1	-1.2	-1.1	-1.2	-1.2	-1.2	-1.1	-1.0	-1.0	-1.0	-1.0	-1.0	-.9	-1.1	-1.0	-1.0	-1.0	-1.0	-1.0
-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.1	-1.1	-1.0	-1.0	-1.0	-.9	-.9	-.8	-1.0	-.9	-.9	-.9	-1.0	-1.1	-1.0	-1.0	-1.0	-1.0	-1.1	-1.1	-1.2	-1.1	-1.1	-1.1	-1.1	-1.1
-.8	-.8	-.8	-.7	-.7	-.7	-.8	-.8	-.9	-.9	-.9	-.9	-.9	-.9	-.9	-.9	-.8	-.8	-.9	-.8	-.7	-.7	-.8	-.8	-.9	-.9	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-.9	-.9	-.9	-.9
-.5	-.5	-.4	-.4	-.4	-.5	-.5	-.6	-.6	-.6	-.6	-.6	-.6	-.7	-.7	-.7	-.6	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.7	-.6	-.6	-.7	-.7	-.7	-.7	-.7	-.6	-.6	-.6	-.6
-.4	-.3	-.3	-.3	-.3	-.4	-.4	-.4	-.4	-.5	-.5	-.5	-.5	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.5	-.5	-.5	-.6	-.6	-.5	-.5	-.4
-.6	-.5	-.5	-.6	-.6	-.6	-.6	-.6	-.6	-.7	-.8	-.9	-1.0	-1.1	-1.0	-1.0	-1.0	-1.0	-.9	-.9	-.8	-.9	-.9	-.9	-.9	-.9	-1.0	-1.0	-1.0	-.9	-.9	-.9	-.8	-.8	-.7	-.7
-1.2	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.2	-1.2	-1.3	-1.4	-1.5	-1.5	-1.5	-1.5	-1.4	-1.4	-1.3	-1.3	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.3	-1.3	-1.2	-1.2
-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.5	-1.5	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5
-1.4	-1.4	-1.4	-1.4	-1.4	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4

Figure 69. ATOVS SD O-B brightness temperature differences (deg C). AUGUST 2006
Channel: AMSUA-9 (100 hPa)
NOAA18, using all observations



.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2
.2	.2	.2	.2	.2	.2	.2	.3	.3	.3	.3	.3	.3	.3	.3	.3	.2	.2	.2	.2	.2	.2	.2	.3	.3	.3	.2	.2	.3	.3	.3	.3	.3	.3	.3	.2
.2	.2	.2	.2	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.2	.2	.2	.3	.3	.2	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.2	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3	.3	.3	.3	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.4	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3	.3	.3	.3	.4	.3
.5	.4	.4	.4	.4	.5	.4	.4	.4	.5	.5	.5	.5	.5	.5	.5	.4	.4	.4	.5	.5	.4	.4	.4	.4	.4	.4	.5	.5	.5	.5	.4	.5	.5	.5	.5
.5	.6	.5	.5	.5	.5	.5	.5	.5	.5	.5	.4	.4	.4	.4	.4	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.5	.5	.5	.5
.3	.4	.4	.3	.3	.3	.3	.3	.3	.3	.2	.2	.2	.2	.2	.3	.2	.2	.2	.2	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.1	.1	.1	.1	.1	.1	.1	.2	.2	.2	.2

APPENDIX I

1. The gross error limits for observation minus background differences of geopotential height in Tables 5, 10 and 11 are:-

Level (hPa)	Geopotential height (metres)
1000	100
850	100
700	100
500	150
400	175
300	200
250	225
200	250
150	275
100	300
70	375
50	400
30	450

The weighted RMS values used in Table 5,10 and 11 are calculated using the following weights:-

Level (hPa)	Weight
1000	3.70
850	3.40
700	2.90
500	2.20
400	1.90
300	1.60
250	1.50
200	1.37
150	1.19
100	1.00
70	0.87
50	0.80
30	0.64

2. The gross error limits for observation minus background differences of windspeed in Tables 6,12 and 13 are:-

Level (hPa)	Windspeed m s^{-1}
1000	35
850	35
700	40
500	45
400	50
300	60
250	60
200	50
150	50
100	45